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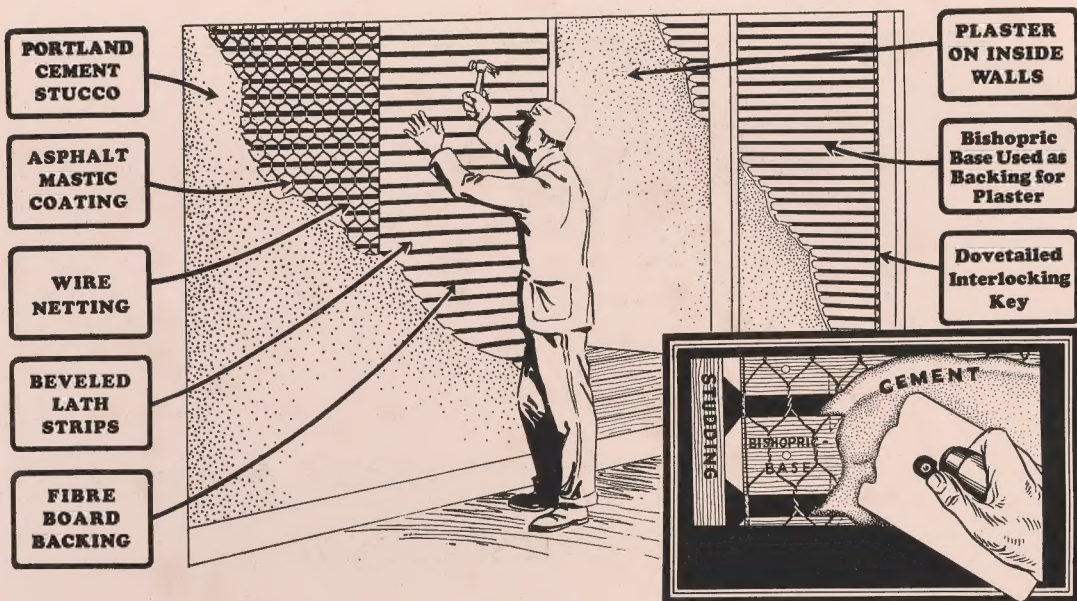
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VOLUME XXVIII

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NUMBER ONE

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BREAKFAST ROOM, RESIDENCE OF AUSTIN MCFADDEN

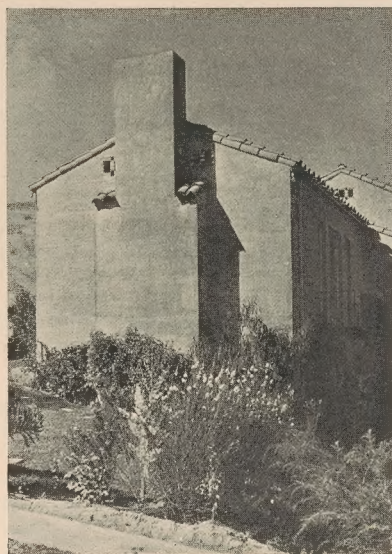
## THE WORK OF WEBBER, STAUNTON AND SPAULDING

BY HARRIS ALLEN, A. I. A.



IN THESE days of jazz and jumble, when the hysteria which is an inevitable aftermath of a great war has not yet subsided, when the natural exuberance of youth runs wild in every direction, it is noteworthy—and refreshing—to find young men doing work that is restrained, thoughtful, and yet far from being commonplace or stereotyped. Webber, Staunton and Spaulding are three quite young men who appear to be proceeding consistently and harmoniously along the straight and narrow path of architecture, avoiding the temptations which must frequently occur. For clients today are eager for novelty, and the glittering butterfly of the picturesque and bizarre flutters enticingly across the way. It is not always easy to resist succumbing to this fascination, even for some of us who are old and weatherworn travellers.

So far, however, the work of this firm displays a sobriety and a firmness of judgment which is surprising and significant. It is not that a picturesque ensemble is not achieved. That is far from being the case. But it is quite



RESIDENCE OF GEO. R. BURY



evidently not deliberately attempted. What happens is, that conditions, requirements, relationships, proportions, are all carefully studied and valued, and their structural expression worked out in terms of the utmost directness and simplicity—I had almost said, sternness.

They have not hesitated to avail themselves of the recent re-discoveries of the beauty of texture and color, in stucco, tile, accessories; but the main impression their buildings make is one of substance, of suitability and strength. There is no frivolity in their designs, albeit an excellent sense of proportion and balance.

Both the McFadden and the Bury houses, illustrated in this issue, are all but massive in their structural solidity, but are so logical in development that they do not seem clumsy, small as they are. It is interesting to note that the sense of scale is unbroken, in mass or detail.

The San Marino School preserves the same salient features, although the detail of its main entrance is somewhat incoherent and could have had more study profitably. As the drawings for the Plaza at Palos Verdes evidently were intended for presenting the scheme and not for final plans, it need only be said that they show a breadth of treatment that should result in a very successful group of buildings.

The interior views here shown have similar qualities to the exterior facades. This results in dignity and restfulness, but also in some lack of the domestic feeling that should be present. In fact, there is the suggestion of a country club at its best. It often happens that an architect "arrives" first with his exterior compositions. As this firm grows in experience, their work is sure to become more mellow and rounded—they have the basic essentials.

#### DRINKING FOUNTAINS INCREASE

The demand for sanitary drinking fountains continues to show a marked increase this year, according to A. G. Haws, of the Haws Sanitary Drinking Faucet Company, of Berkeley. The company manufactures a variety of models, designed to meet every requirement. The factory has been one of the notable successes of recent years in the Bay District and its products are in use in factories, schools and buildings throughout the Western states.

#### FOR LUMBER STANDARDIZATION

Through the representation of Emory Standord Hall and Sullivan W. Jones, the American Institute of Architects is taking an active part in the national movement for lumber standardization. Present standards do not conform in every small detail to all the desires and preferences of any one group. But it is reported that a forward step has been taken.

## Two Good Moves

To render better service to its many patrons and friends in Northern California, the San Francisco general offices of

### The Pacific Coast Architect

have been moved to Suite 1313-1314 thirteenth floor, in the Claus Spreckels Building, which is centrally located at

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There is no change of ownership, management or personnel, and the editorial policy will continue under direction of

HARRIS ALLEN, A. I. A.

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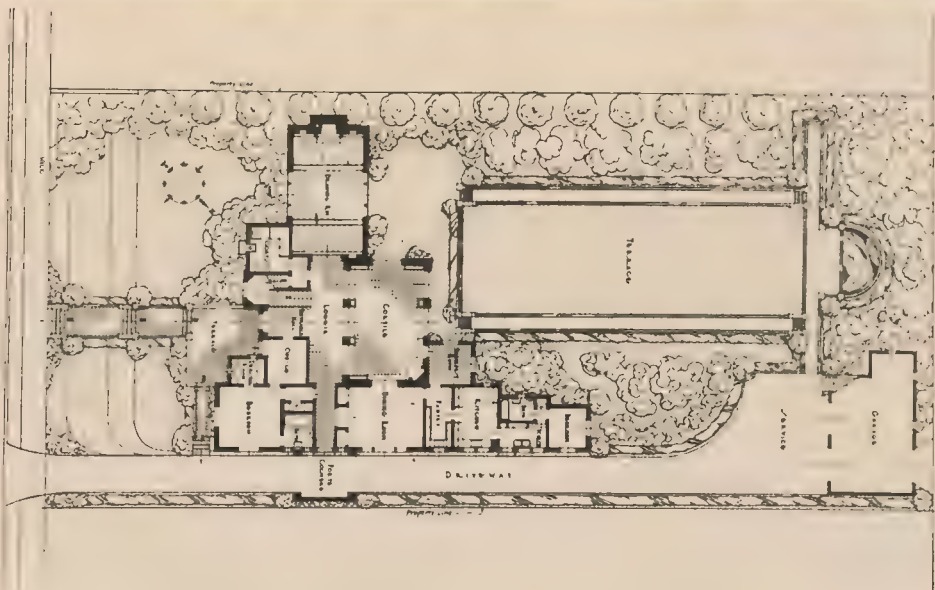
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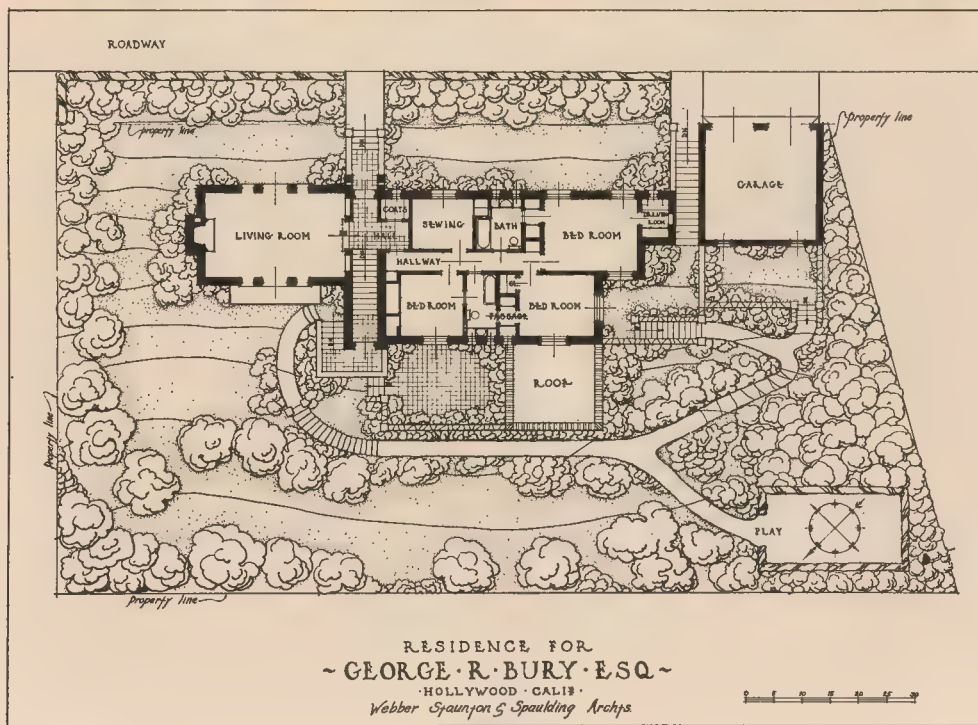
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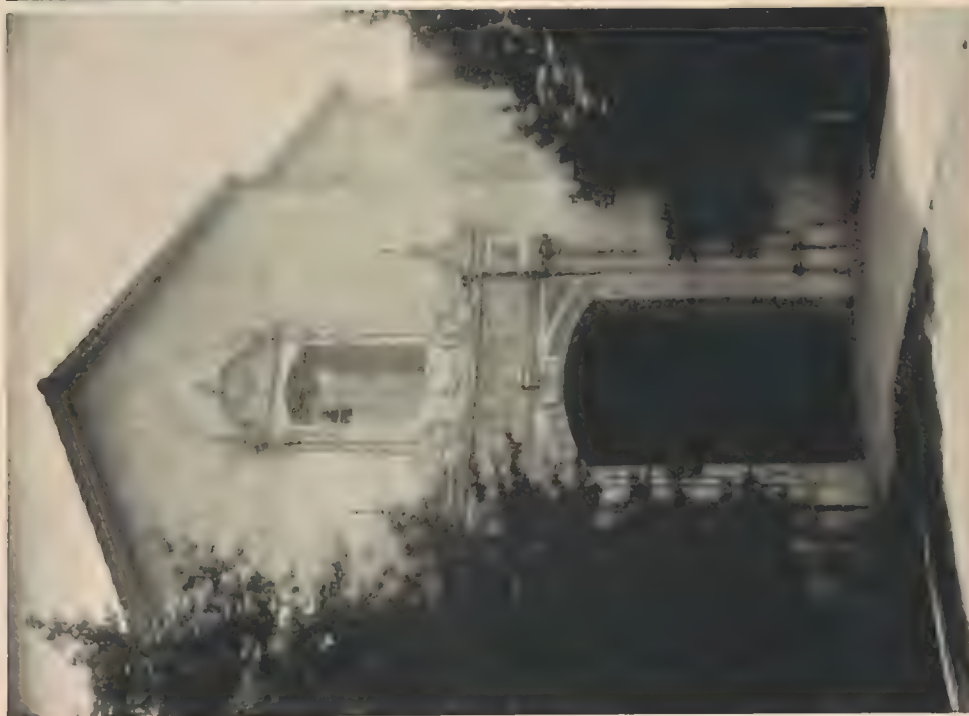


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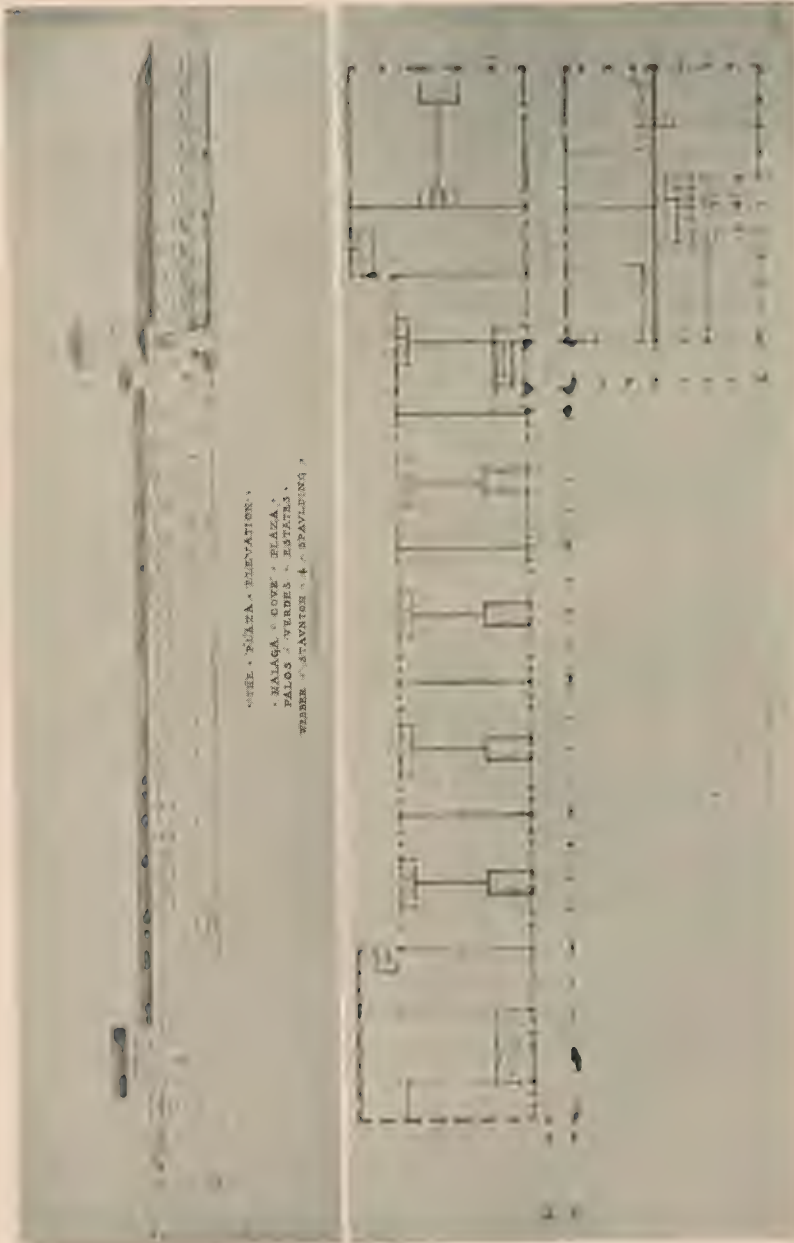
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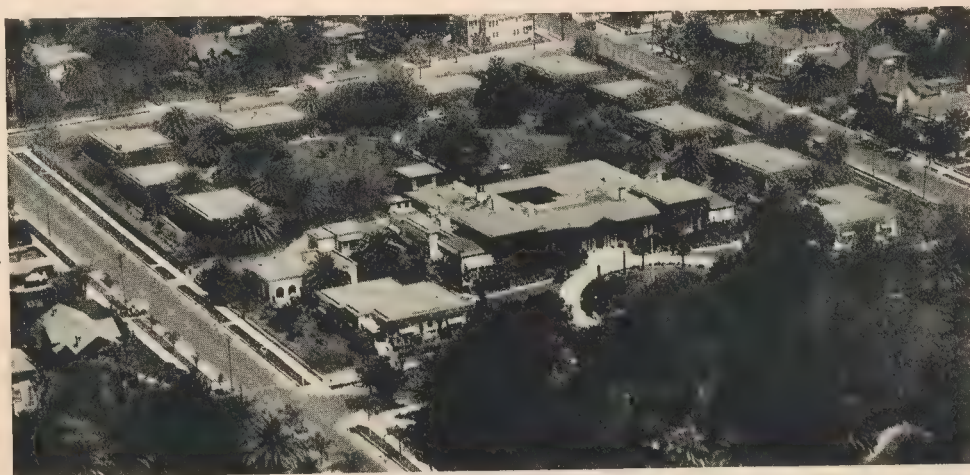
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## EL MIRASOL "THE SUNFLOWER"

BY FREDERICK CLIFT



WHILE stopping at El Mirasol a few years ago, it occurred to the writer that he would like to own the place, so quietly distinctive, and to lavish on it thought and care which would make it unique. His experience with the Clift Hotel in San Francisco had convinced him that what lifts one hotel above another is atmosphere—a something intangible, but real, which

surrounds the place like an aura. The ownership passed to him in 1920.

To Albert Herter, the well-known artist, came the idea of El Mirasol as a home-hotel with a limited number of guests, using the former residence of Mr. Herter's mother as a nucleus for a group of guest bungalows. This residence was one of the most notable places in the Channel City. Located directly opposite beautiful Alameda park, the grounds occupying an entire city block and lying on the direct route to the Old Mission, its stately proportions made of it the most conspicuous landmark in the entire city, aside from the Mission building itself.

The house, designed by the well-known New York architectural firm of Delano and Aldrich, is massively built of stone and brick, with plaster exterior; and with its beautiful patio surrounding a court centered by an exquisite marble fountain, is one of the most perfect and striking examples of Spanish architecture to be found in all California.

It was turned into a bungalow hotel, early in the spring of 1914, the initial plan calling for eleven bungalows, of plaster exterior with arcade verandas and tile edged roofs to harmonize in exterior appearance with the main house, which was, at the same time, being remodeled to provide a central dining room, lounging rooms and office. Three bungalows have since been added. Its success was immediate and absolute, and during the time it has been open, it is scarcely too much to say

that it has housed more people of social and financial prominence, not only from New York, Boston, Chicago, Philadelphia and other American cities, but from Europe as well, than any other hotel of equal size in the United States. As a well-known Philadelphian remarked, "El Mirasol is as well known in the clubs of the East as the Waldorf of New York; and better in a way, inasmuch as El Mirasol also stands for California."

To attempt to describe this achievement in terms applicable to the ordinary hotel, is to convey no slightest conception of what it really is. With a boldness in the use of color hardly equaled elsewhere in America, there has been produced an effect, at once brilliant and restrained.

As one enters the front door, the attention is momentarily diverted from the immediate surroundings, as the eye catches a glimpse of glowing color in the hotel park, around which the bungalows are grouped, straight on through the patio and across the arcade beyond the fountain; but the beauty of the interior is compelling, and very quickly claims our entire attention.

Standing in the midst of the lobby, one looks to the left, through the main dining room, to the "Peacock Room," a smaller dining room which takes its name from two magnificent hand-painted panels. This room is hung with choice textures, the floor a beautiful design in orange and blue, the tables and chairs corresponding. The "Peacock Room" was designed by Delano and Aldrich and was added to the main house a year ago to meet the growing demand made upon the management by those desiring to take advantage of this beautiful setting and unique service in entertaining; and during the season there are few days when it is not the scene of smart luncheons and dinners, for which style of entertaining it has become very much "the thing" among the elite of Santa Barbara and Montecito.

To the right from this vantage point, the view is through the library, which, with its large collections of books and periodicals, and a cheerful fire always blazing, is one of the favorite lounging places with the guests. Beyond this is the drawing room, also with an open fire,

and the walls hung with many of the original collection of pictures, while still further beyond is the card room, so absolutely aglow with warmth and color as to impress one immediately with the appropriateness of the name "El Mirasol" (The Sunflower), and architecturally balancing the Peacock Room at the other extremity of the main front of the building.

Stepping from the lobby directly ahead the visitor finds himself in the glassed-in tea room, where tea is served each afternoon from four to six o'clock, to the accompaniment of the tinkling fountain just without; and opening from this on the right is the open cloister, gaily furnished for lounging: a favorite out-of-doors rendezvous and for afternoon tea in warm weather.

Passing out of the patio, one is at once in the midst of El Mirasol park, with the vine clad bungalows surrounding, and, beyond, a magnificent view of the Santa Ynez mountains. So quiet and peaceful is the whole effect that one quite forgets that the busy streets are very near, and has the feeling of being in a quiet country garden. Perhaps in no other direction is the fidelity to detail before noted, and the rare taste and skill with which it is carried out, more clearly shown than in this wonderful garden. Although every path is bordered with flowers of endless variety in color, and, as each bungalow is examined separately, it seems to have a flower garden all its very own, yet so skillfully has the whole been composed that not only is the result an impression of absolute unity,



TYPICAL BUNGALOW INTERIOR

but, with all the infinite variety of color, the impression is still of the dominance of the hotel colors—the orange and blue—as definite and unmistakable as it is throughout the entire interior of the main building through which we have been passing.

In the bungalows themselves, each room is a studied harmony of chintz and paint. Beds, chairs, dressing tables, desks—all in a delicate cream color with striping to match the dominant tone of the chintz in each instance—the lighting fixtures of special design to harmonize—the delicate lace bed spreads—altogether produce the effect of a delightful country home.

The patio dining room is of practically the same capacity as the original main dining room, the side fronting the patio being entirely of glass; while the decorations are free interpretations of sixteenth century Persian miniatures. The decorations consist of two large paintings facing each other from the opposite ends of the room, while the five small panels between the lobby doors are filled with paintings of corresponding size. In all of these, the gorgeous colorings of the Persian origi-

nals are reproduced in brilliant style. Altogether this room is one of rare charm and affords opportunity to care for the entertaining without encroaching upon the comfort of the guests of the hotel.

*Editor's Note:* El Mirasol came through the recent Santa Barbara earthquake unscathed, and housed many refugees. A greater Santa Barbara is already rising from the ruins of the disaster of June 29th.

\* \* \*

#### NEW SPECIFICATIONS PRACTICAL

THE architects of Los Angeles and vicinity are enjoying the use of new specifications recently promulgated by the Blue Diamond Company of that city. It is claimed that everyone who has used these specifications has found them to be extremely practical.

They are four in number, and include Brick Work, Concrete, Interior Plaster, and Cement Stucco. Each booklet covers its subject in detail, taking up each important phase of its particular theme so that the architect has comprehensive working data at hand.

To illustrate: the "Specifications on Cement Stucco" embraces three distinct bulletins. One deals with exterior plaster on frame construction, and the third treats the various popular cement stucco finishes. General data, scope of work, materials used, preparations for plastering and the application are the subjects covered.

It was only after considerable thought and study that these specifications were issued by the Research Department of the Blue Diamond Company, under the direction of Paul W. Penland and Harry V. Adams, architects and engineers. In the compilation of the data, many prominent California architects and engineers were consulted.

\* \* \*

#### A NEW GUERIN PORTFOLIO

A portfolio of interest to all architects and artists has just been announced by Edward C. Bridgman, Publisher, 240 West 40th Street, New York City.

It consists of full color reproductions, direct from twelve original paintings by Jules Guérin. The plates from which these reproductions have been printed were made with extreme care by the Beck Engraving Company of Philadelphia. The twelve subjects are folio-ed in a buckram binding, 13 3/4 inches wide by 18 inches high. The subjects rendered are as follows:

1. The Alamo Mission, San Antonio, Texas.
2. Christ's Church, Alexandria, Va.
3. Old Dutch Church, Tarrytown, N. Y.
4. The Missions, San Luis Rey de Francis.
5. King's Chapel, Boston, Mass.
6. Old Christ's Church, Philadelphia, Pa.
7. St. Paul's Chapel, New York.
8. First Congregational Church, Old Lynne, Conn.
9. The Mission of San Carlos.
10. Old Swedes Church, Wilmington, Delaware.
11. Old St. Peter's Church, Philadelphia, Pa.
12. San Jose de Aguayo, San Antonio, Texas.

It seems almost needless to go into any explanations of Mr. Guérin's work or to elaborate upon his ability as an architectural renderer. The retail price of this portfolio is \$25.00, and any information regarding its sale and distribution may be obtained from Edward C. Bridgman, Publisher, 240 West 40th Street, New York City.

\* \* \*

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\* \* \*

Hudson & Munsell, Architects, announce the removal of their offices to 631 Petroleum Securities Building, south-west corner Tenth and Flower Streets, Los Angeles.





EL MIRASOL, SANTA BARBARA, CALIFORNIA. DELANO AND ALDRICH, ARCHITECT  
PHOTOGRAPH BY J. WALTER COLLINGE



BUNGALOWS, EL MIRASOL, SANTA BARBARA, CALIFORNIA, DELANO AND ALDRICH, ARCHITECTS  
PHOTOGRAPH BY J. WALTER COLLINGE





CLOISTER LOUNGE, EL MIRASOL, SANTA BARBARA, CALIFORNIA, DELANO AND ALDRICH, ARCHITECTS  
PHOTOGRAPH BY J. WALTER COLLINGE



ABOVE: PEACOCK ROOM; BELOW: MAIN DINING ROOM. EL MIRASOL, SANTA BARBARA, CALIFORNIA  
DELANO AND ALDRICH, ARCHITECTS. PHOTOGRAPHS BY J. WALTER COLLINGE





ABOVE: LIBRARY; BELOW: DRAWING ROOM. EL MIRASOL, SANTA BARBARA CALIFORNIA  
DELANO AND ALDRICH, ARCHITECTS. PHOTOGRAPHS BY J. WALTER COLLINGE



ABOVE: PATIO DINING ROOM; BELOW: PATIO. EL MIRASOL, SANTA BARBARA, CALIFORNIA  
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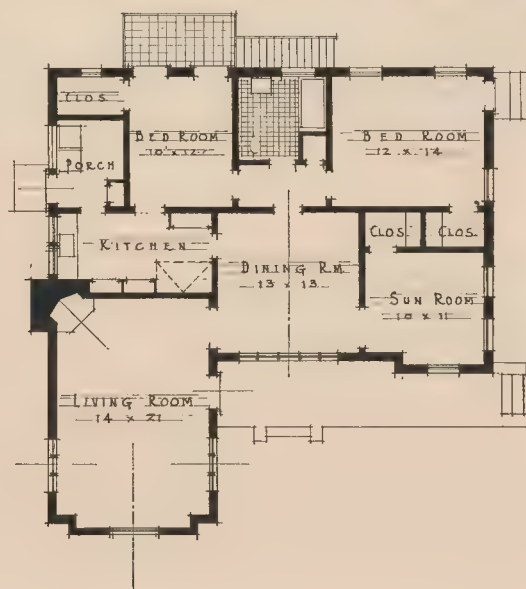
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*Above, Christian Science Church, Los Angeles, California, Elmer Grey, Architect; at left, St. Paul's M. E. Church, South, Clarksburg, West Virginia, Robert McArthur, Architect; at right, The Union Church, Hinsdale, Illinois, Tallmadge & Watson, Architects.*

THE light colored brickwork in these churches, harmonizing perfectly with the stone trimmings, produces a stately effect and permits a variety of treatment, both in wall texture and color effect.

The great number of face brick churches—large and small—in all parts of the country give ample proof of the structural and artistic success of face brick in church buildings; and the skill with which architects are today handling face brick is in no small measure responsible for this distinct trend toward the use of face brick in church architecture.

You will find many splendid examples of the modern use of face brick in "Architectural Details in Brickwork," a portfolio of more than a hundred halftone plates, issued in three series, each enclosed in a folder ready for filing. This series will be sent postpaid, to any architect making request on his office stationery.

"English Precedent for Modern Brickwork," a 100-page book, beautifully illustrated with halftones and measured drawings of Tudor and Georgian types and American adaptations, sent postpaid for two dollars.

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# EDITORIAL

## *Airing a Theory*

NOW that school boards and legislators and architects have become all "het up" over the Carbon Dioxide Standard, which demands at least thirty cubic feet of fresh air per minute to every occupant of a school room, and numbers of expensive systems have been installed, along comes the New York Ventilation Commission, headed by Dr. C. E. A. Winslow, professor of Public Health, and knocks this theory into a cocked hat. The commission has found that a small amount of cool, fresh air improves the efficiency and health of pupils. The high temperature necessary to prevent drafts under the old theory increases respiratory sicknesses and decreases working powers.

So passes, presumably, another costly experiment, for the authority of this commission, made up of distinguished engineers and scientists, is impressive. It would seem the part of wisdom to test theories more thoroughly before adopting them on such a universal scale, especially when health is at stake. A suspicion arises that the doughty old Governor of California had some justification for referring to "the fads of educators." Fortunately for us, there is little need for other than natural ventilation in the Golden State, and the prowess of

its scholastic athletes proclaims to the world what California air can do.

## \* \* \* *Craftsmanship*

AGAIN we print examples of fine craftsmanship from the hand of Elmer Grey. This is more than good "draughtsmanship"; it is *original* and not a *copy*. And while a man may be a good architect and still lack the ability to convey his thoughts graphically, it is not an enviable situation. He may be more to be pitied than censured; but like the "Kiwi," the bird who cannot fly, he is out of place. If a man grows rusty in the use of the hand, he is but too apt to slacken also on his mental, creative function, and unconsciously slide into combining and rearranging and adapting until it is no longer a case of craftsmanship, but of craft.

## \* \* \* *A Comment from the Lay Press*

"Good architecture is not a luxury, but a symptom of happiness, energy and foresight, and where it is lacking, there these things are insensibly lessened, even though the mass of men do not know that it is they lack."

—From "The Times," London.

## THE BUSINESS BAROMETER SHOWS BUSINESS GOOD

BY B. C. SMITH  
Vice-President S. W. Straus & Co.

BUSINESS and industrial conditions throughout the country and especially along the Pacific Coast are fundamentally sound, and business in practically all lines is steadily strengthening. The building industry was never in more satisfactory condition, and there is probably no safer barometer to follow, in attempting to forecast general business volume, than the statistics of construction.

Building is under way in our Pacific Coast cities to a degree that promises an activity throughout the coming months which may establish a new high figure for the year's total, probably \$500,000,000 in construction costs for the 80 major cities of our seven Far Western States. Mr. S. W. Straus, president of S. W. Straus & Co., in a recent interview published by a New York newspaper, is quoted as anticipating a \$6,000,000,000 total of building in the United States for 1925.

Business soundness or weakness is always first noted in building. Tightening of money in anticipation of a slowing down of business is always promptly reflected in a curtailment of building plans and general confidence is always immediately shown in new construction projects. Building is an essential and basic industry, but it employs and is dependent upon large investments and it is one of the first indices to reflect fundamental financial conditions.

But we are not entirely dependent at this time upon the tendencies of the building industry for verification of the opinion that business generally is progressing along sound lines. The employment curve shows an increase over the first part of 1924. Workmen are earning more money and manufacturers in more than a score of industries are handling a greater volume of business than last year.

The increase in volume earned by workers is due also to an increase of working hours per week, rather than to higher wages per hour. Almost spectacular gains have lately been reported from the lines of trade which suffered the most last year. The cost of labor, material and practically all essential commodities, is apparently more firmly stabilized at this time than at any period since the World War. The importance of stabilization cannot be too strongly emphasized in an attempt to estimate the general business situation.

Progress is dependent upon harmony in labor circles, efficiency of workers and genuine co-operation between manufacturers and merchants. So long as these controlling factors are kept in working accord there is no need for apprehension, even though slight variations may occur here and there in volume of current business in any given line or branch of industry.

(Continued on page 39)



TRANSPORTATION BUILDING, LOS ANGELES, WALKER &amp; EISEN, ARCHITECTS

FRED POTTS, CONTRACTING PLASTERER

THIS class A 12-story concrete loft building shows a striking example of advanced plastering work and the economy and beauty of CALIFORNIA STUCCO for all jobs. The entire exterior surface was covered with a *one* coat dash of CALIFORNIA STUCCO of a permanent sage-green color.

CALIFORNIA STUCCO PRODUCTS COMPANY  
SAN FRANCISCO AND LOS ANGELES



# SAN FRANCISCO ARCHITECTURAL CLUB



THE well attended June meeting of the San Francisco Architectural Club several important questions were again brought up for earnest discussion by the members.

Much interest has been aroused by the project to revive the Pacific Coast scholarship, funds for which are now being collected. The boys of the club are keen to show what their atelier training has done for them and are anxiously awaiting word that the required sum has been raised and a definite announcement of the date of the competition. The fund is gradually growing, but the committee in charge would be grateful if those who have already subscribed and those friends of the club who intend to subscribe would be more prompt in sending their pledges to the secretary or the treasurer of the club.

Another proposition that is engaging the attention of the club is the subject of club rooms. The present quarters have been outgrown to the extent that the atelier can not be accommodated properly and present arrangements do not permit of the social activities the Entertainment Committee would like to arrange. There has been considerable discussion as to whether the club should retain their present home and renovate it to suit new conditions, or seek another location, probably nearer the majority of architectural offices where could be arranged quarters that would better take care of a growing atelier and would also enable the Entertainment Committee to give full scope to an active social program. This problem is now in the hands of the board of directors and a solution will be offered to the members at very early date.

An atelier committee is busily engaged making preparations for a big exhibition of the work of the atelier to mark the close of a highly successful and progressive season. This exhibition is to occur in the early fall, probably September, is planned to be one of the most interesting and representative showings of student work that has been held at the club for a number of years. A special effort is to be made to interest high school students and those about to enter the architectural profession in order that they may become acquainted with the club



ATELIER DRAWING

and its great work in assisting the younger draughtsman in pursuing his studies.

A new atelier, affiliated with the San Francisco Architectural Club, was started recently in Sacramento under the patronage of Mr. Edward Flanders, formerly of this city and well known up and down the Coast. Through his very capable direction this atelier is doing remarkably well, as is shown by the character of the work done and by the amounts of awards received at each judgment of problems.

## THE BUSINESS BAROMETER

[Concluded from page 37]

One of the most encouraging aspects of the business situation today is the disappearance of all spectacular booms and widespread depressions. The important thing is to keep our national commercial machine functioning smoothly. It is necessary for business to safeguard itself against inflation and thus seek protection from deflation. Over-production in any line should be discouraged. A stabilization of production alone can maintain a permanent balance between supply and demand.

Data of value to testing engineers and others interested in concrete tests have just been published in Bulletin 14 of the Structural Materials Research Laboratory, Lewis Institute, Chicago, "Effect of End Condition of Cylinder on Compressive Strength of Concrete" by Harrison F. Gonnerman. The report is reprinted from the 1924 Proceedings of the American Society for Testing Materials.

## PLATE GLASS RECORD

All records for the production of plate glass in the United States were broken during March, when the total output reached 9,773,957 square feet. According to P. A. Hughes, secretary of the Plate Glass Manufacturers of America, the end of the year 1925 will see the establishment of a new twelve-months' production record for the manufacturers of plate glass in this country.

Plans have been completed by Birge M. Clark, Architect, Palo Alto, for two homes to cost in the neighborhood of \$15,000 each. They will be built for members of the faculty on the Stanford campus.

Charles H. Kyson is president, H. B. Pentland, vice-president and M. L. Barker, secretary-treasurer, of the newly organized Architects' League of Hollywood, which holds weekly luncheons.



*Interior of Grauman Metropolitan Theatre, Los Angeles. Done entirely in Concrete. William Lee Woollett, Architect.*

## TRULY CREATIVE

**A**MONG advanced achievements in concrete is the interior of Grauman Metropolitan Theatre, Los Angeles.

From lobby to proscenium the conception has been executed in the same basic material used to insure structural soundness and economy.

Especially worthy of note are the rough, form-marked walls with murals painted on them, the great open trusses and massive beams, the decorated columns and the symbolic statuary—all of concrete.

The result is a daring creation indicating possibilities through the medium of concrete undreamed of a few short years ago. And it may well be that this truly creative work will serve as an inspiration for other individual achievements destined, perhaps, to herald a new era in architecture.

\* \* \*

Competently supervised, modern workmen can produce concrete in any form, texture or color the architect may direct. If you are interested, we shall be most happy to send further information. Simply address the nearest office listed below.

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CHARLOTTE, N. C.	DES MOINES	LOS ANGELES	NEW YORK	PORTLAND, OREG.	VANCOUVER, B. C.
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# PERSONAL GLIMPSES

**I**N few professions is the individual so camera-shy as is the architect. Rarely does he receive the recognition that is his due. Never does he seek it. As a result, most of us see only a name or a completed creation of his and glimpse little or nothing of the personality behind it. In this column each month we hope, in some small measure, to heed the cry of "Author, Author," so far as the leading architectural craftsmen of the West are concerned, by presenting photographs of them and sketches from life. Nominations for this "small niche in The Hall of Fame" are acceptable from our readers.

*[Sketches from life in this issue by Ramm]*



W. B. FAVILLE, F. A. I. A.

**T**O FEW men is it given to rise higher in their chosen profession than has W. B. Faville, of Bliss and Faville, Architects, San Francisco. Or to retain in greater degree the respect and personal regard of his clients, associates and all who know him.

His career has been a succession of professional triumphs and an inspiration to many. After his early schooling, he was with Green and Wicks in Buffalo, N. Y., later graduating from Boston Tech. For some time thereafter he was with McKim, Mead & White in New York City during a period when that notable firm's staff included many individual names which have since become distinguished in their own right.

It was during his association with McKim, Mead & White that Mr. Faville met Mr. Bliss and thus was born a partnership which has endured in California since 1898, when they established themselves in San Francisco.

Soon after they located in California, the Oakland City Hall Competition was won and another notable work of that earlier day was the St. Francis Hotel, San Francisco.

The Masonic Temple, The Bank of California, Mercantile Trust headquarters, Liverpool, London & Globe Insurance Building, Southern Pacific Building, Matson Building, James L. Flood home are a few of the many notable San Francisco monuments to the talent of Bliss & Faville while they also won the San Francisco Bank of Italy competition and the competition for the State Building. The Hotel Oakland, Oakland, and the Pacific Telephone & Telegraph Building, Los Angeles, are theirs, too.

Mr. Faville has attained national distinction in more ways than one and is the only Pacific Coast architect ever chosen president of the American Institute of Architects. He served with honor in that capacity for two years. He

has held most of the offices in San Francisco Chapter, A. I. A., and shares himself, his jovial spirit and the inspiration of his fine mind and faculties with his fellows in many clubs and societies. He is a good citizen, a good neighbor, a good friend and if he isn't a good architect, the American Institute of Architects erred when it made him a Fellow.

His hobby? Deep water! Riding San Francisco Bay ferryboats to and from his home in Sausalito.

## CRANE COMPANY ANNIVERSARY

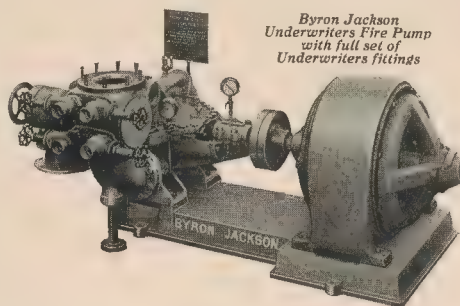
**S**IX hundred and sixty-five employees, all of whom have served with the Crane Company twenty-five years or more, were the honored guests of the company at the Congress Hotel dinner which marked the opening of the Crane Seventieth Anniversary Convention.

High mark for number of veterans attending went to Bridgeport, Conn., factory. Its special train brought 165 employees, all of whom had passed a quarter-century or more with the company.

## Byron Jackson Fire Pumps win Underwriters approval

On June 17, 1925, the National Board of Underwriters approved the Byron Jackson 500, 750 and 1000 Gallon Underwriters Fire Pump.

This approval by the National Board of Underwriters is of particular significance to the purchasers of such pumps in the West as it makes the Byron Jackson Pump Mfg. Co. the only manufacturer of approved fire pumps on the Pacific Coast. For the first time purchasers now have the advantage of local service after installation, eliminating tedious and costly delays.



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Underwriters Fire Pump  
with full set of  
Underwriters fittings

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## Enameled Effects, Beautiful and Lasting, with Fewer Coats

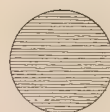
CALIFORNIA Pines are ideal for all kinds of interior finished woodwork. They dress to velvety smoothness of surface. First coats of paint are easily absorbed, forming a lasting foundation for finishing coats. The light color is easy to "hide," thus effecting an economy in cost of enameling.

Permanency of finish is assured because of the smooth surface, and the grain does not "raise" to disfigure or crack the enamel. The delicately beautiful grain of California Pines produces a pleasing "natural" finish, while staining is highly successful because "muddy" effects are entirely absent.

You will find that carpenters like to work with these soft pines because of the ease and rapidity of cutting, and the accurate workmanship possible. The economy of California Pine in-

terior woodwork lies in the lessening of labor for installation and the elimination of wasting material in cutting.

We have just issued for architects and builders a set of California Pine Information Sheets covering all uses of these woods. These data sheets are compiled by a Wood Technologist formerly with the U. S. Government Forest Products Laboratory at Madison, Wisconsin and now connected with this association. He will gladly answer inquiries or supply data for specifications.



Soft, easy-cutting texture and uniform grain of California Pines result in velvety-smooth surfaces under the planer.



Sharpest profiles and most finely graduated uniform curves are obtained. Lines and corners are sharp without splintering.



Soft "corky" texture enables nailing without splitting — even up to the very edge. Nails hold firmly.



Grain of California Pines will not "raise" to disfigure or cause cracking or chipping of paint or enamel surfaces.

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## A SHORT HISTORY OF BRICK

BY M. T. CANTELL, F.R.S.A.; L.R.I.B.A.

*Of Cantell & Spencer, Engineers and Contractors, Los Angeles*



BRICK, the most durable of all materials used in the construction of buildings, is made of clay. Clay generally consists of alumina and silica, either alone or in combination with a small percentage of other constituents, the chief of which are lime, magnesia, iron and salt. Alumina is however the principal constituent. It makes the

clay plastic and becomes very hard when heated, but it shrinks, cracks, and warps in drying. Silica, which is a compound of the two elements silicon and oxygen, exists more or less in all clays in chemical combination with alumina. It is also found in an uncombined state as sand.

This silica alone is infusible, except at a very high temperature, but combined with alumina and a small quantity of oxide of iron it is fusible at a comparatively low temperature. A small quantity of lime in the clay is also a valuable constituent as this diminishes the contraction of the brick in drying. And it acts as a flux in burning, causing the grains of silica to melt, thus binding the material together. But an excess of lime will cause the brick to melt and lose its shape.

The color of the brick also depends upon the varying proportion of these constituents as well as upon the temperature at which the brick is burned. This branch of the subject, however, is too technical for me to deal with in an address of this description, so we will have to leave it in favor of a few more generally interesting items.

### BRICK IN ANCIENT TIMES

The use of brick as a building material dates back to prehistoric times. It is in fact next to the oldest material used for the construction of buildings. The only material in use before brick was timber, and this was at the time used for the construction of Lake Dwellings. Stakes or piles were driven into the bottom of lakes and dwellings erected thereon. They were built in this way to guard the inhabitants against the attacks of wild animals and hostile tribes. The only other dwellings during this period, known as the Neolithic, were natural rock caves with a small entrance before which a large stone was placed to act as a door.

The exact date at which brick was used is not known, but it was certainly in prehistoric times. So far as we at present know, civilization dates back at least 10,000 years in the Nile Valley. Written history now dates back about 7,500 years. Prehistoric graves and other ruins of civilized races which are very numerous, date back at least 2,500 years further.

Excavations have led to the discovery of the tombs of King Zer who reigned 5,400 B.C. These are of brick. Other ruins show that brick during this period was very common in house building, the walls being about 2 feet thick. The size of the bricks were 9 inches or 10 inches long, 4½ or 5 inches wide and about 2¾ inches thick—only about 1 inch longer and a half inch wider and thicker than those we use at the present time. The wonderfully preserved condition of these ancient bricks prove beyond doubt the extreme durability and suitability of this material for all classes or building construction. They were found in almost as good condition as when they were placed in position by their ancient builders. But the art of building with brick was far more perfect in the Mesopotamian Valley on the plains of Babylonia.

The main structural industry of this country during the

Sumerian period, prior to 4,500 B.C., much earlier than the Babylonian period, was that of brickmaking and building. It was a land of brick buildings, but at this time columns and piers were mostly of cedar brought from Amanus and Lebanon, but when this was scarce brick was used. The roofs were of timber beams with a covering of palm leaves, timber being too costly to use for covering purposes.

### THE EARLIEST BURNT BRICKS

In Egypt brick were dried in the sun and used without further treatment. In Babylonia the ordinary bricks were dried in the sun, but the best were burned for additional strength and durability, this being necessary owing to the dampness of the country during certain seasons.

The earliest burnt bricks were 8¾ inches by 5½ inches wide and 2¼ inches thick. These gradually increased during the period to 12 inches by 7¾ inches and 2 inches thick. Three thousand two hundred years B.C. and for many centuries afterwards bricks were 11 inches or 12 inches by about 5½ inches wide and 3¾ inches thick. During this early period burned brick was used for the same purposes as we use the best selected hard burned common brick of the present time, such as for portions of walls carrying heavy loads, foundations, piers, lacing courses, facing, drains, paving, and structures exposed to dampness.

Storerooms and tanks were further damp-proofed by being lined with bitumen, which was also used as the mortar for burnt brick. The land produced a plentiful supply of this material. During this age immense walls surrounded the cities, those of the most ancient Babylon, were 9 miles around, 85 feet high, and 340 feet thick, surrounded by a moat which was lined with burnt brick laid in bitumen.

### THE HILL OF TROY

The extreme durability of brick is also shown in the excavations of the Hill of Troy. This hill contains the ruins of seven towns, one above the other. A section cut through the hill contains a record of man's progress from the late stone age, about 4000 years B.C. to the height of Greek civilization. In the second town, which was burned down about 3,000 B.C., brick was used. The texture of these show they were made from a clay mixed with a straw. In size they were almost the same as our present brick, which have remained practically the same since about two centuries ago, when a tax was imposed on bricks in England which limited their size in that country to 8¾ inches by 4¾ inches wide, by 2¾ inches thick, with four courses in the wall to measure 12 inches high.

At numerous intervals ever since the first use of brick, attempts have been made to adopt a larger size but these have always failed owing to the greater economy in the manufacture and the laying of the present size.

In Egypt walls were faced with glazed or enamel tile as far back as 5000 years B.C., but glazed or enamel brick similar to those we now have were not used until the ninth century B.C. The art of glazing was known centuries before its application to building material. Glazed pottery dates back to prehistoric times. The earliest relic of this work is a vase made during the reign of King Mena 5,500 years B.C., about the beginning of historic times. Mena's name is inlaid in violet glaze on a green glazed body. Long before this glazed ware was used for beads and amulets, but although the art was so well known during this period, glass was not made separately until the time of Tahutmes II, 1,500 years B.C. The Egyptians

(Concluded on page 45)



Interior View, Elks Club, San Francisco  
 Architects, Meyer & Johnson, San Francisco  
 General Contractors, R. McLeran & Co., San Francisco  
 Painters, Heinsbergen Decorating Co., San Francisco and Los Angeles

## An Artistic Triumph

of decorative skill has been wrought in the new building of the Elks Club, San Francisco by the Heinsbergen Decorating Company of San Francisco and Los Angeles.

The rich, mellow tones, in exquisite graduations, interpret the genial atmosphere of this Fraternity, and lend a luxurious, lingering charm to the Interior. The walls were coated with

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# A SHORT HISTORY OF BRICK

(Continued from page 43)

were experts in glass ware, but it was all wrought pasty. The art of blowing glass was not known until the Roman age.

## EXPERT WORKMEN ONLY

The Assyrians, after the Babylonians, also built with brick and used cedar for supports, but they faced important buildings with alabaster and limestone imported from the mountains north of Nineveh. The alabaster was used for carved work, instead of inscribing glazed brick and enameled tiles as did the Babylonians.

During these periods expert and fully qualified workmen only were allowed to be engaged in building construction and first-class work only was permitted. These conditions were attributable to the very severe penalties attached to jerry building. In ancient Babylonia the laws governing contractors were to the effect that if a house, or any part of a house fell down and killed the owner, the builder was put to death. If it killed the owner's son, the builder's son was put to death. If one or more of the owner's slaves were killed, the builder had to restore him slave for slave besides compensating the owner for any damage to his goods and re-building the house or the part which had fallen. Similar laws also governed the practice of medical men. If a doctor caused the death of one of the upper class or inflicted a serious injury through unskilled treatment he was liable to have both hands cut off. If the victim was a slave, the doctor was compelled to give the owner a new one. If it involved the loss of an eye he had to pay half the slave's value.

If similar laws existed at present the building owners and general contractors would be more careful in selecting their mason contractors, incidentally to the benefit of the members of associations similar to that which I have the honor of addressing.

## DURABLE AND ECONOMICAL

The ancient Romans were also expert in the making and use of brick. I have personally inspected a number of examples of brick and tile work in England built during the Roman occupation in which the brick appeared to be equally as sound, dense, and durable as when they were made.

The great antiquity of brick, the ages through which it has withstood the elements and other agents which so quickly attack and destroy other building materials is abundant proof of its being the most permanently durable building material we have. Not only will it resist the destroying influence of age, moisture, or acid laden atmosphere, but it is of great strength, is a fire-proof material, a first-class insulator, which enables it to keep a house warm in winter and cool in summer. It is pleasing in color, adaptable to all forms of construction, and is the most economical building material where these properties, together with comfort and permanence, are required.

NOTE—The foregoing article was prepared from an address given at the recent annual banquet of the Los Angeles Mason Contractors' Association, by Mr. Cantell.

\* \* \*

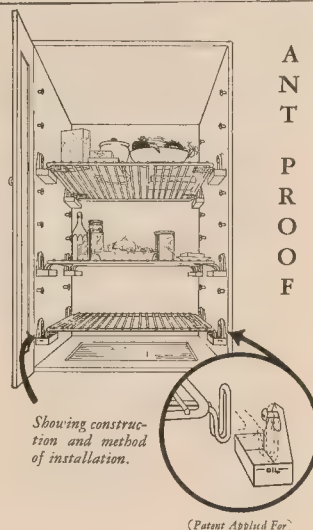
## FIRE LOSSES ENORMOUS

Tabulations, just completed by the National Board of Fire Underwriters, show that during the year 1923, the value of fire-consumed property was \$535,372,782. This was an average of \$1,466,775 every day, or \$1,019 a minute. The fire loss in America during the same year was \$145,302,155. This preventable waste has increased 269 per cent during a period of twenty years in spite of many commendable efforts to raise the standard of building construction through the enactment of laws and ordinances.

## "PINE HOMES" BOOKLET

For those interested in building, the California White & Sugar Pine Manufacturers' Association has issued a most attractive and informative book, the cover page of which is illustrated here. The booklet is based on a report made by Frederick A. Williams, Architect, following his investigations in California, supplemented by others in eastern sections where these woods have been used for many years.

The Association also issues a technical filing folder of Lumber Data. Both of these are available on request to Room 685, Call Building, San Francisco.



Planett All Wire Ant-Proof Cooler Shelves are extremely sanitary, easy to clean, and afford splendid air circulation.

They are strong and rigid, electrically welded, easy to install, and made in any size required.

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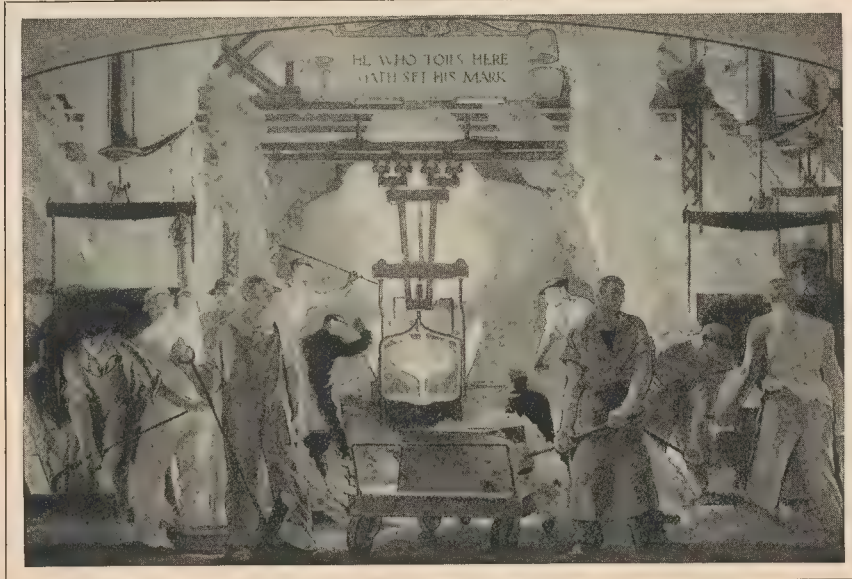
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"Tapping a Cupola," mural painting by Arthur Covey for the Kohler Co. Administration Building, awarded gold medal of the Architectural League of New York at the International Exposition of Architecture and the Allied Arts, New York, April 20—May 2



Bell Tower  
Kohler Administration  
Building

The Kohler offices, the factory, the Village of Kohler, form a unique community, where neighborly interest and civic purpose find reflection in the quality of Kohler products—enameled plumbing ware and private electric plants

FOR his "Tapping a Cupola" and for another panel, "Pouring a Mould," Arthur Covey of New York received the Architectural League's gold medal for mural painting at the recent International Exposition.

Both works were executed for Kohler Co. for their new administration building at Kohler, Wisconsin. This impressive building, designed by Brust and Philipp, Architects, of Milwaukee, is a unit in the notable development in community planning which is known as Kohler Village.

A brochure describing this development will be gladly sent to architects and to others interested in community planning.

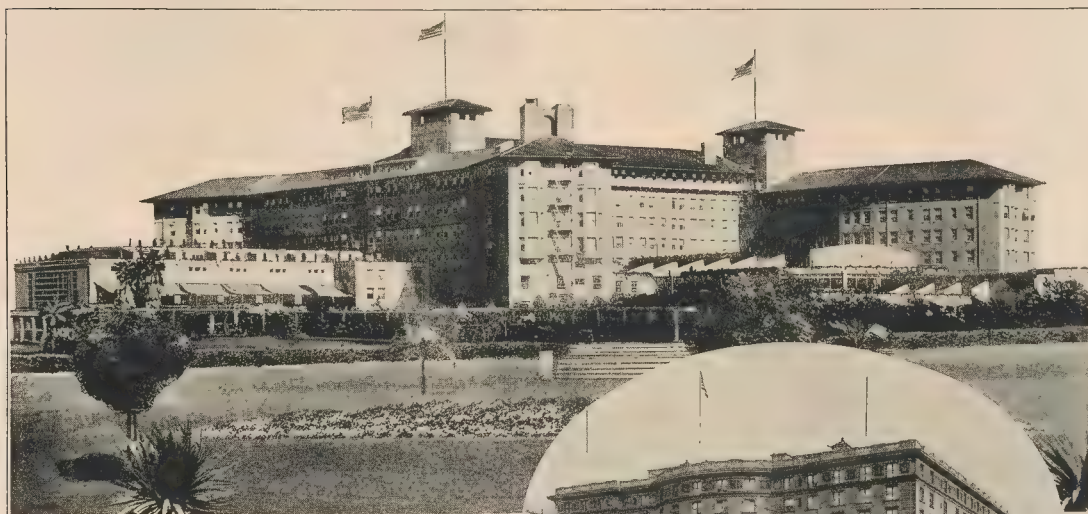
Kohler Co., Founded 1873, Kohler, Wis. • Shipping Point, Sheboygan, Wis.  
BRANCHES IN PRINCIPAL CITIES

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# Why most fine hotels are Chamberlin equipped



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Equipped throughout with Chamberlin Metal Weather Strips.

**COPLEY PLAZA HOTEL, BOSTON, MASS.**  
Chamberlin equipment installed in 1912. Test made and witnessed, April 10, 1925, proved that 97.34% of possible in-leakage is prevented by this 13-year-old Chamberlin installation.  
With a wind velocity of 12 M. P. H., 1.18 cu. ft. per minute leaked through the Chamberlin-fitted windows, having 20.33 lineal feet of crack. (Average wind velocity in United States during winter months is less than 12 M. P. H.)

The modern American hotel presents a vast expanse of window and door space designed to admit the maximum of light and air to guest rooms and corridors.

That most hotel architects have chosen Chamberlin Metal Weather Strips and Door Bottoms to insure protection at all openings, is evidence of Chamberlin quality, the Chamberlin installation policy, and the permanent value of the Chamberlin guarantee.

Chamberlin Metal Weather Strips, Inside and Outside Door Bottoms and Calking, comprise the only weather-strip equipment which is applied by the manufacturer and the completed installa-

tion of which is guaranteed by the maker for the life of the building.

The value of this policy to the owner, and therefore, to the architect is proved by the many 10, 20, and 30 year old Chamberlin installations which in engineering tests show a remarkably high degree of efficiency.

Our nation-wide organization is available to architects. Details and estimates furnished without obligation.



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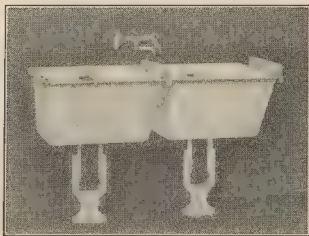
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210 Thompson St.  
Tel. East 8395

Tacoma  
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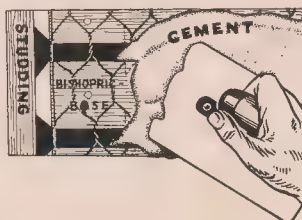
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## ALBERT FARR, ECLECTIC

BY HARRIS ALLEN, A. I. A.



WHILE considering the remarkable versatility of Mr. Farr, the word "Eclectic" came to mind, and the definition was found to be "one who practices selection from all systems or sources." Although this might seem to infer lack of originality, it is so pat as far as it goes that I shall let it stand. It is obvious that one would not choose to write about a person who selected unintelligently, unsuccessfully, and who, therefore, had no personality of his own to instill into his work.

Mr. Farr is far indeed from such case. He is intelligent; he has extraordinary good taste and discrimination; his work is uniformly successful, with high lights, to be sure. And the personal element is so marked that one is never surprised at learning Mr. Farr is the architect

of such or such a house. Whatever he touches is imbued with a quality of picturesqueness which never violates the canon of good composition—proportion, balance, scale.

It follows that at reasonable intervals one may expect to see a fresh group of houses from his office with the certainty there will be no staleness of repetition, no conventional commonplace nor yet bizarre oddity—this sounds as though his work were negative, whereas in truth it is emphatically positive. Good, sturdy, masculine architecture, whatever he does, but the trouble is, he'll not stay put; just as you think he is getting to be a specialist in one style, up he bobs with a brilliant example of something totally different.

The present collection of views proves no exception to this rule of contraries. A truly charming Tudor mansion for Mr. Lewis (and incidently Mr. Farr distinguishes smartly between city and country homes in treatment of both plan



and facade) bears a clear family likeness to Compton Wyngate and Penshurst, without a single inherited feature. Mr. Knowles' house is along dignified Georgian lines as some of our very best colonial families interpreted them, with a few modern touches, certainly. We jump to Italy to gratify Mr. Wickett, and here is an irreproachable villa which needs but time for its garden growth. Shrugging their shoulders with true Gallic sophistication, the two city residences of Mr. Ghirardelli and Mr. Gerstle are quite the last word in French elegance—but mind you, no foolish frills; nothing ostentatious, rather the distinguished simplicity of the real aristocrat. And so to an essay in the popular Spanish style of the day, for Mr.

Maples. This is treated sincerely enough, but suffers, I think, from lack of space to express the owner's wishes. Remember what Mr. Farr did with that gorgeous Spanish-Colonial place of Mr. Moore's at Menlo Park.

The glimpses shown of interior treatment are, as was to be expected, exactly in harmony with the spirit of the house and are incidentally furnished accordingly, so that I suspect the architect's advice was asked and taken in many cases.

Mr. Farr has found a worthy collaborator in Mr. J. Francis Ward, who seems to be fitted by nature and training for just the demands which are made upon an architect's office by the broad scope of Mr. Farr's talents.







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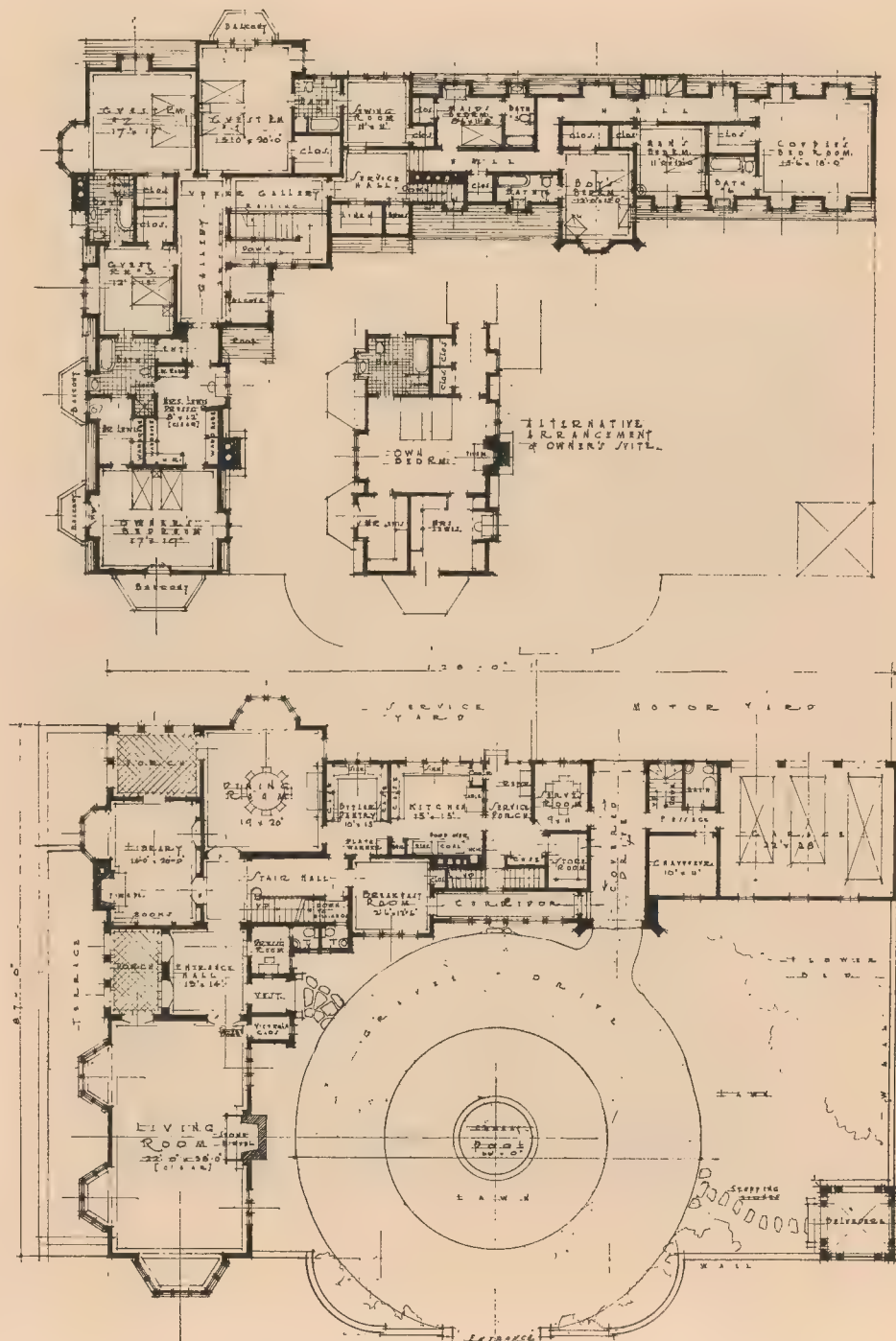
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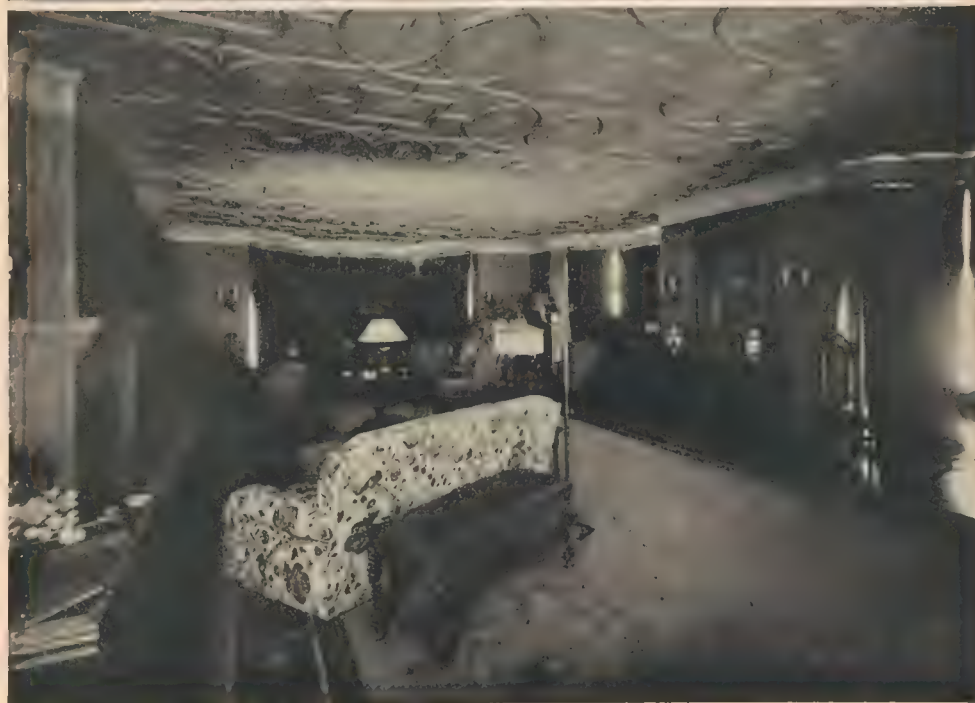


ENTRANCE COURT, RESIDENCE OF MR. GEORGE LEWIS, BEVERLY HILLS, CALIFORNIA. ALBERT FARR, ARCHITECT. J. FRANCIS MASON, PHOTOGRAPHER.



FLOOR PLANS, RESIDENCE OF MR. GEORGE LEWIS, BEVERLY HILLS, CALIFORNIA  
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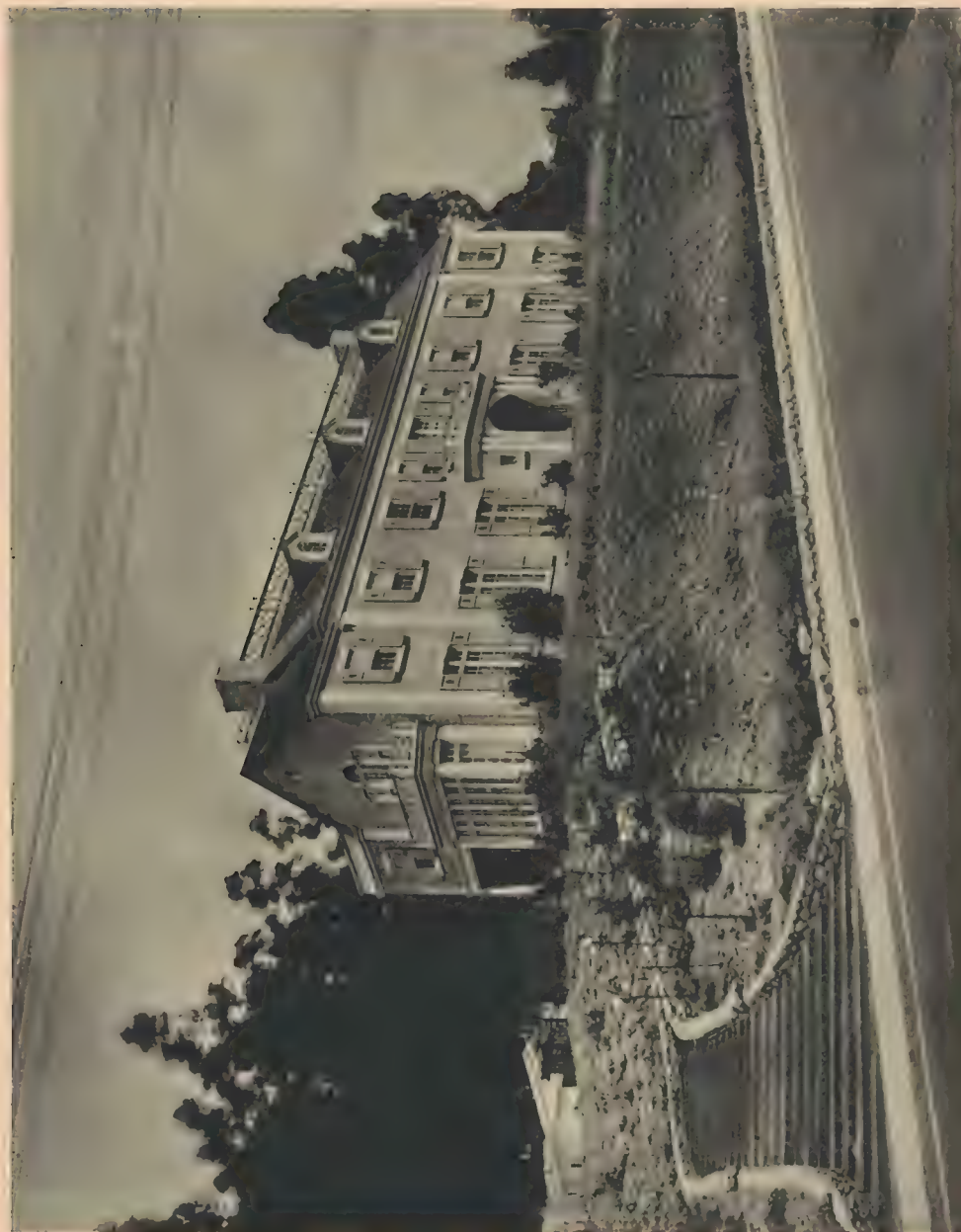


ABOVE, DINING ROOM; BELOW, LIVING ROOM, RESIDENCE OF MR. GEORGE LEWIS, BEVERLY HILLS, CALIFORNIA  
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## LOS ANGELES HOSPITAL PLANS

BY S. P. TROOD



**A**FTER several months of painstaking research and study, during which every phase of modern hospital construction and equipment was given careful investigation, the Allied Architects Association of Los Angeles has completed the preliminary plans for the new \$5,000,000 addition to be built by the County Board of Supervisors, and the Association is now engaged in preparation of the final plan, with all detailed drawings and specifications, so that construction work on the new unit can be started not later than October 1.

The decision to erect the new unit was reached by the County Board of Supervisors several months ago, and the contract to design the structure was awarded to the Allied Architects Association shortly afterward, but the Association was unable to proceed with its work until the county had selected and purchased a site, a matter involving considerable delay owing to the large amount of ground needed.

However, in order that no time might be lost, the Association, immediately after the contract was awarded, undertook a survey of the needs of the County in respect to hospitalization. A special committee, composed of members and officials of the Association, held a series of conferences with doctors of the staff of the hospital and with members of the Board of Supervisors, in order to determine the size and type of building best suited to the county's needs. In this work, the Association's committee was materially aided by two widely-known hospitalization experts, F. S. Chapman, of Cleveland, O., and Dr. A. G. Broderick, of Oakland, who were retained by the County to study the hospital situation. These experts, in a carefully prepared report, made a number of important recommendations, which have been closely followed by the Association in preparing plans for the structure.

In addition to the investigation carried on within the County, representatives of the Allied Architects Association have made two tours of the country, visiting hospitals in practically all of the larger cities, for the purpose of obtaining data on the most recent improvements in hospital design. The first of these tours was made shortly after the contract between the County and the Association had been signed.

When sufficient data to serve as a guide had been obtained, and when the site, four square blocks immediately adjoining the present institution, had been determined

upon, the Association began the preparation of the preliminary design. Results of the surveys made by the Association and by the county's experts were made available to each member of the Association, and each member was requested to prepare a design which in his opinion met the county's requirements.

More than twenty studies of the problem were submitted in response to the first request of the Association, and through a series of general meetings, each of these studies was brought up for discussion and friendly criticism. Plans which were generally felt to be inadequate were eliminated until only three were, by general vote, finally retained. These three sketches were turned over to a special Jury on Design for further study, and under the supervision of this Jury, the three sketches were combined into one general plan, known as the final preliminary plan.

This plan was completed just prior to the departure of Edwin Bergstrom, president of the Association, and Myron Hunt and Sumner Hunt, vice-presidents, for New York, to attend the national convention of the American Institute of Architects as delegates from the Southern California chapter. They were accompanied by J. H. Bean, member of the Board of Supervisors, and Dr. N. N. Wood, Superintendent of the General Hospital. En route to New York, and on the return trip to Los Angeles, more than forty hospitals in various cities of the country were inspected by the party, and new ideas gained from these inspections were noted on the final preliminary plans, which were in the possession of the party.

Early in May the party returned to Los Angeles, and the seventy members of the Association were immediately apprised of the results of the tour. Each member was asked to submit a new study of the problem, and at a meeting held shortly after, seventeen new designs were hung on the walls of the Association's drafting rooms for discussion and consideration. Of these, nine were finally selected as best meeting the county's requirements, and the nine sketches were turned over to a Jury on Design, appointed by the Board of Directors of the Association, for further study and development.

This task is now engaging the attention of the Jury on Design, composed of a number of the best-known architects in Southern California. The task before this Jury consists of selecting from each of the nine sketches those features which seem to be the most practical and the most desirable, and bringing them together into one plan which will not only be a complete and harmonious architectural unit, but which will be thoroughly utilitarian as well.

(Continued on page 53)



STUDIES FOR LOS ANGELES GENERAL HOSPITAL, LOS ANGELES, CALIFORNIA. ALLIED ARCHITECTS' ASSOCIATION





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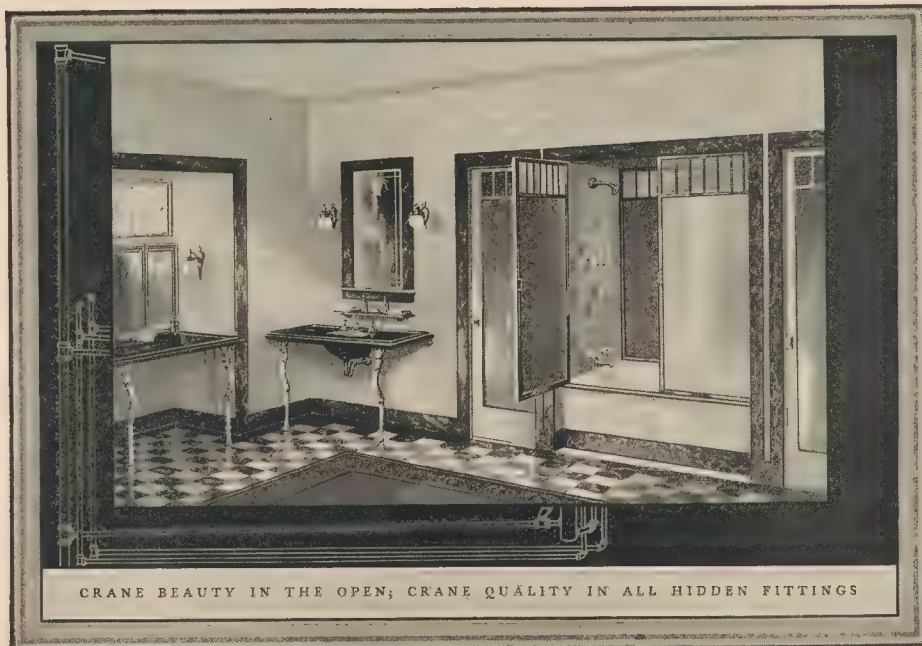
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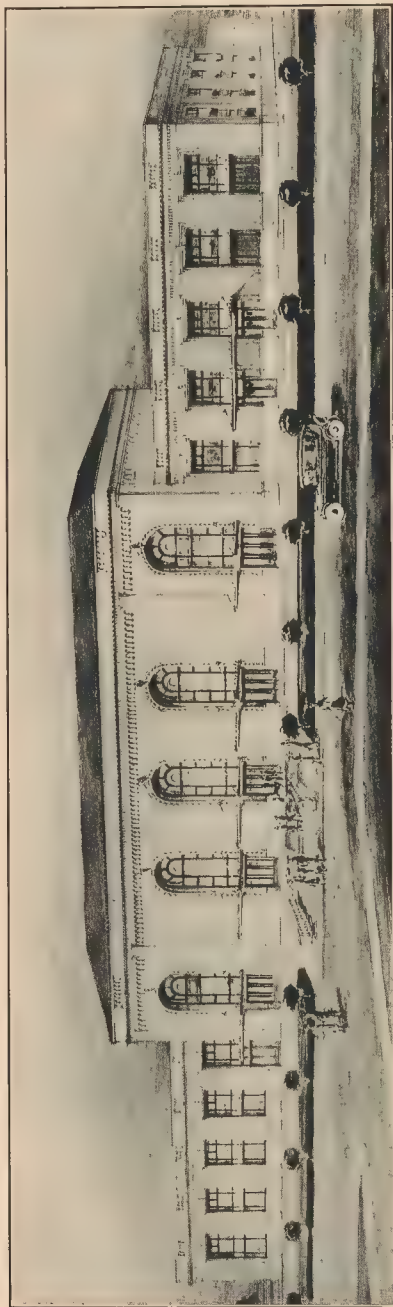


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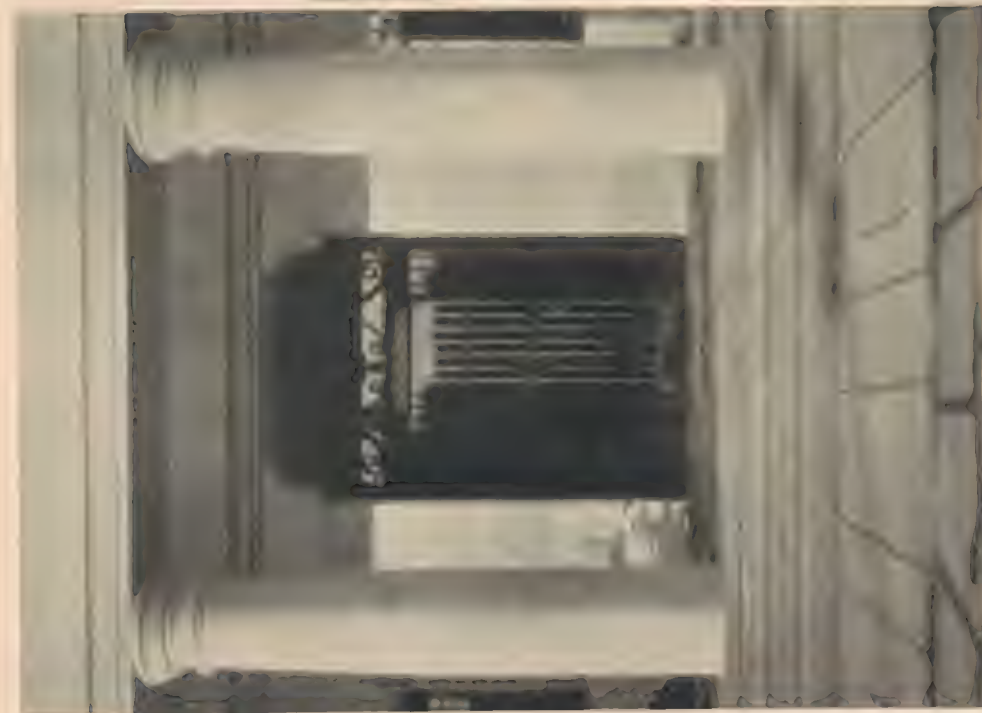
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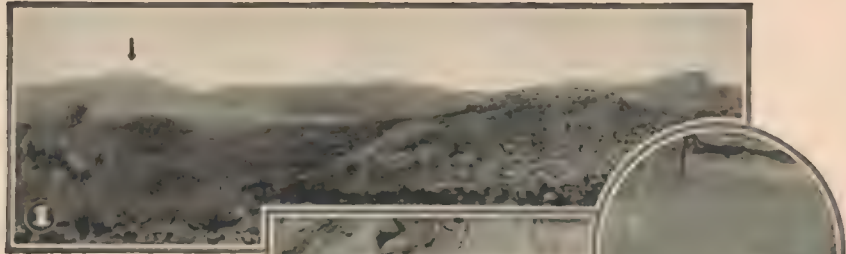
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8. Partial view of crushers and conveyors at edge of quarry floor.

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## EDITORIAL

### *Strike While the Iron is Hot*

ARCHITECTS and engineers are continually deploring the prevalence of poor construction. Much of this complaint is futile. Some of it has crystallized into action, and a slow improvement has been effected in building codes, which are now still far from being adequate, farther from being standard.

It is folly to ignore the fact that earthquakes occur more frequently on the West Coast than in other parts of the country. It is just as foolish to exaggerate their dangers. It has been clearly proved that what damage has been done has resulted from lax building methods. The difference between safe and unsafe construction is not great. It is a matter first, of exact information; second, of reasonable legal requirements; third, of proper supervision.

The recent experience of Santa Barbara has again centered public attention on this subject. Undoubtedly there has been a more thorough investigation of cause and effect, by men of scientific training and practical experience, than in any previous similar event. The information resulting therefrom will be more valuable, more exact, than we have hitherto obtained. Shall we profit by it?

It is the duty of every individual and agency connected with the building industry to act to-

ward that end. Realizing this obligation, arrangements have been made to publish in THE PACIFIC COAST ARCHITECT a series of articles dealing with various phases of the earthquake hazard, written by authorities in each line. They will deal with architectural and engineering aspects of the earthquake-proof structure, foundations, materials, devices, fire protection, and local seismological data. They will contain specific and accurate information, and will be no more technical than is necessary.

California is by no means the only state subject to quakes. The record of shocks in the eastern part of the United States goes back for 300 years. And the loss of life in California has been relatively small; in fact, trivial compared with dangers of many other kinds. Property damage has been high. And this is unnecessary. It so happened that in the last issue of this Journal several views were shown of "El Mirasol," a unique hotel in Santa Barbara. Solidly and honestly built, this structure, like many others, escaped with little or no damage, although in the same area with buildings which were total wrecks. The moral is obvious, and must not be forgotten. Building laws must be amended to forbid poor construction, and inspection must enforce the law.

### PACIFIC COAST BUILDING ACTIVE

S. W. STRAUS & CO. reports a new high record in building activities has been achieved in Pacific Coast cities during the first half of 1925. A greater volume of building permits was issued during the first six months than during any comparable period previously. More than 100,000 permits were issued in eighty-two principal cities of the Pacific Coast during the first half of the year, —a total estimated construction cost of \$27,065,466.

With half the year gone carrying such a record and nothing now in evidence which seems likely to reduce the current building program, a new annual record may be confidently expected with the close of the current six months, the Straus report says.

\* \* \*

There is unprecedented activity in Portland and a continuance of the resumption of building program in Los Angeles previously observed, together with exceptional building programs reported from Sacramento, Berkeley, Stockton, Beverly Hills, Fresno, Redlands, Pomona, Riverside, San Gabriel, Twin Falls, Reno, Eugene, Salem, Ogden and various other cities.

\* \* \*

### PREDICTS NEW RECORD

W. R. Fawcett, secretary of the Pacific Clay Products Company, who is in close touch with the situation, predicts that a new record for big building construction will be set in Los Angeles this summer.

### A NEW MAGAZINE APPEARS

THE INSPECTOR is the title of a new magazine which appeared in July, and which is attracting much favorable comment. It is the official publication of the Pacific Coast Building Officials' Conference. Mark C. Cohn is the publisher and Elford Eddy, the editor.

They have done their work well and if they maintain the same high standard in future issues, as in the first, the publication should accomplish a great deal, not only on the Pacific Coast, but nationally, toward carrying out its avowed mission to represent the building inspectors and to bring about more uniform building regulations, as a clearing house for constructive thought among contractors and all who have to do with building. THE PACIFIC COAST ARCHITECT extends the fraternal hand of greeting to THE INSPECTOR and wishes it every success.

\* \* \*

### THE PLASTERING ART MAKES BOW

"THE PLASTERING ART, a Pacific Coast Publication," is the title of a new monthly magazine which made its bow to the public during July. It is the official magazine of the Master Plasterers Association of San Francisco, and was published under direction of Robert Johnston, Secretary. From a typographical standpoint, it is probably the finest publication issued in behalf of the Plastering Industry in the United States, and its text and illustrations are well and carefully chosen. It should do much to further the cause of Better Plastering and of better building generally. It is distinctly a magazine of craftsmanship.



*A home in the Country Club District, developed by J. C. Nichols Investment Co., Kansas City, Mo. Van Brunt and Hertz, Kansas City, Architects; U. S. Water & Steam Supply Co., Kansas City, Plumbing Jobbers; Kansas City Plumbing & Heating Co., Plumbers*

WHENEVER the roll is called of America's finest residential developments, the famous Country Club District of Kansas City is certain to be named among the first.

In a large proportion of the homes in this district, the J. C. Nichols Investment Co., its developers, have used Kohler Ware. In the typical house illustrated above are two "Viceroy" built-in baths, two pedestal lavatories, and a twin-drainboard sink of Kohler make.

The beauty of Kohler Ware and the quality and uniform whiteness of its enamel—always signed with the name "Kohler"—make it a fitting choice for the finest homes; just as its reasonable cost suggests its use for less expensive installations.



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*To the beauty of the homes of Kohler Village is due in no small measure the quality of Kohler products—enameled plumbing ware and private electric plants*

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# KOHLER OF KOHLER

*Enameled Plumbing Ware*



# THE LIGHTING OF PICTURE GALLERIES AND MUSEUMS

BY CHARLES W. MEIGHAN



THOSE members of the San Francisco Chapter, American Institute of Architects and of the San Francisco Architectural Club who were fortunate enough to attend a lecture arranged by the Chapter at the Club Rooms on O'Farrell street on the night of July 16th were well repaid. Despite the mid-summer date, the club rooms were well filled.

The lecturer was Mr. S. Hurst Seager, Fellow of the Royal Institute of British Architects, Fellow of the New Zealand Institute of Architects. From the outset, it was apparent that the distinguished guest was conversant with his subject "The Lighting of Picture Galleries and Museums." And well he might be, as this problem which has been before the architectural profession since the early part of the nineteenth century, has been studied by him in all parts of the world.

It is a problem of such universal interest to the architectural profession that it is hard to realize that we appear to be as far from a true solution of it as in the earliest days. Mr. Seager has been writing on and studying this subject for a great many years and is the author of many technical articles in British Architectural journals, in *L'Architecture* of Paris, and in American and New Zealand journals. At the conclusion of his present tour, he plans to return to his home in Christchurch, New Zealand, and there compile in book form, the results of his studies of recent years.

His lecture, delivered here, was profusely illustrated by means of stereoptican views which carried the interested audience to the leading museums and art galleries of the world.

In his introduction, Mr. Seager said: "A course of lectures would be required to deal adequately with all branches of this important subject. In this demonstration, it is proposed to illustrate a line of thought which would include contrast seen in types of double and single glazed galleries—experiments to show the relative amount of light and its diffusion—proofs that the top-side lighted method in its various forms of application is the only one which can give proper illumination.

"Illustrations will be offered showing that the top side lighting method can, without any structural alteration, be at once applied to side-lighted rooms and to top-lighted galleries in turn by the adjustment of opaque blinds, expedients which may be used where this system of adjustment is inapplicable and the structural alterations necessary for the permanent conversion of top-lighted galleries into the top-side lighted ones."

Mr. Seager's lecture included illustrations which bore out his statement that not a single European gallery has given consideration to the fact that a picture worth buying is also worth seeing. One series of views showed types of top-lighted galleries, at Birmingham, National Gallery, at Sydney, Australia, Fitzwilliam Museum, Cambridge, South Kensington Science Museum and many others.

This was followed by a series of experiments to show the effect of contrast in lighting and the kinds of glass to be used for its diffusion, which in turn was followed by a most interesting series showing attempts which have been made to overcome defects in lighting and examples designed on the principle of shielding the spectator.

These took the audience to the Gallery at Munich, where the source of light is too far from the pictures and

the room ill-lighted and gloomy, Berne Art Gallery, where a screen to shield the light from the spectators has been employed in one small room with the result that the lighting of the pictures was excellent, the Ryks Museum, Amsterdam. Here it was demonstrated that the central vaulted hall on each side is wholly wrong and the great hall unfitted either for pictures or sculpture, or for any other exhibits.

In this series, many other "notable failures" in great galleries of the world were shown. It was followed by a series to show that the top-side light method is designed to carry out the principle that the picture wall must be the best-lighted part of the room. The diagrams showed the light directed to the walls instead of, as is usual, toward the spectators and objects in the center of the room, overcoming completely reflections and eye-strain and bringing out the beauties of the objects shown. Sections of a model room erected in order to test the efficiency of the method were revealed, as well as a section of a two-story gallery illustrating how the principle may be applied in two-story buildings.

The Sargeant Art Gallery at the small town of Wanganui, New Zealand, was illustrated by the lecturer, showing the scheme of lighting and seats for the spectators in subdued lights, showing that the light on the walls is greater than on the floor, a view in the Gallery at the Grand Palais, Paris, showing that by the use of the high screen a top-side light has been provided and the result is excellent. The spectator is in the shade of the screen and can view the pictures without any annoyance from reflections, and entirely free from "museum headache."

Other convincing views showed Mr. Seager's interesting experiment at the Louvre, Paris, with the ill-lighted Chauchard Collection and the view of the St. Quentin De la Tour pastels, contrasted with the room in which the experiment was made where all the pictures on the wall are excellently lighted and quite free from reflections.

To review in detail all the excellent points of Mr. Seager's informative lecture would require more space than this writer is permitted, but it may suffice to say that the lecturer most emphatically "made his point", and convinced his auditors that there is a great work to be done by the architectural profession and directors of museums before we can be said to have attained the lecturer's goal: "Not a building good enough, but the best possible, scientifically correct, structurally perfect, and architecturally magnificent."

In conclusion, we can only say with "The Builder" of London that we "hope before long Mr. Seager will collate all the material at his disposal and publish a standard work on the subject, for which there is a gap on every architectural bookshelf."

## BISHOPRIC BASE APPROVED

BY THE first amendment to the San Francisco building ordinances, since 1906, which permits the use of less expensive materials, a patented backing for stucco or plaster walls, known as Bishopric Base, is endorsed by the Board of Supervisors and Mayor Rolph.

According to Leo Meyer, of Meyer-Muzzall Company, San Francisco distributors, it was only after convincing proof and tests had been made that the amendment was authorized.

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# SAN FRANCISCO ARCHITECTURAL CLUB

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THEO. E. RUEGG, *Secretary*  
IRA SPRINGER, *Treasurer*

*Directors:* LAWRENCE H. KEYSER    LAWRENCE STIER    HARRY LANGLEY



HE growth of the San Francisco Architectural Club was indicated by the synopsis of the membership reported by Theo. G. Ruegg, Secretary, at the regular July monthly business meeting held in the Club Rooms at 77 O'Farrell Street. Secretary Ruegg's report showed that the membership now totals 145.

The treasurer's annual report, for the year ending June 30, 1925, was read and approved. It revealed a healthy condition in the club's financial affairs.

There was a splendid attendance for a midsummer meeting, which indicated that interest in the club activities on the part of the members is quite keen, and this was noticeable, too, when Mr. S. Hurst Seager, F. R. I. B. A., delivered an interesting lecture on July 16.

The turnout of members of the Architectural Club was highly creditable in view of the fact that it was "vacation time."

The lecture was given under auspices of San Francisco Chapter, A. I. A., and every one who attended felt more than repaid.

At the regular monthly meeting of the club, the following officers, having been previously nominated and being unopposed, were declared duly elected:

Treasurer—Ira Springer;

Directors—Lawrence C. Stier, Harry Langley.

Appropriate remarks were made by the retiring officers and by the incoming officers.

The general discussion regarding club quarters was continued. It remained undecided.

Upon the proposal of James Magee, that a class be started for studying the orders, there was a brief discussion, after which the matter was referred to the directors. It is expected that a report will be made and action taken at the next meeting.

Officers urge all the members to turn out regularly for the meetings, and to take an active part in the work of their club.

# LOS ANGELES ARCHITECTURAL CLUB

LOS ANGELES Architectural Club is demonstrating its right to be known as one of the liveliest organizations of the kind of the Pacific Coast, the latest evidence being the midsummer entertainment at the Crystal Palace French Cafe.

No better comment could be made on this midsummer jinx than that contained in the clever announcement, written by Roy Kelley, vice-president of the Club. The announcement was original enough to deserve complete reproduction, "Art Work" and all, but space limitations do not permit. However, here goes to do the best we can. The announcement reads:

"WE BEG TO ANNOUNCE THE RENAISSANCE OF THE ARCHITECTURAL CLUB.

"At the last regular monthly meeting of the Club, held several months ago, your esteemed Vice-President was asked to take charge of the meeting and with the greatest faithfulness and fidelity he reported at the meeting to find three members present out of an unpaid membership of 97,634. He has been silently planning his revenge ever since and now, at last, with the departure of President Garnsey for Europe, the sweet opportunity has come. A committee of expert wreckers has been appointed for the occasion.

"We are now prepared to officially bury the Architectural Club in true and ancient, yet dignified, style and we invite you to be present at the funeral.

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"There will also be: No Business, No Speeches, No Reading of Minutes. No reference to architecture or allied subjects. (We had Garnsey shanghaied to Europe to make this promise safe.)

"SPECIAL ADDED ATTRACTION. A 3-hour talk on excavating—illustrated with steam shovels. By a man who has wrecked many architectural clubs.

"The following distinguished guests will be present: Smith Brothers, Meyer & Holler, Lydia Pinkham, Luther T. Mayo, Foreman & Clark, Volstead. Don't Miss This! Everybody Welcome! Bring your friends! This is not restricted to Club Members.

"NO RESTRAINT TO YOUR BEHAVIOR. Basket Parties Welcome. BODIES CALLED FOR AND DELIVERED. Police Ambulance in Attendance. All the comforts of home—without the explanations. And Last but Not Least, a wonderful Parisian Dinner. Noiseless-soup, corned beef, cabbage, ham, eggs, special may be finger bowl, everything. Satisfactory or your money back.

"Price \$1.50—including ambulance ride and bed in receiving hospital. Try to get in—then try to get out. Everybody welcome.

"Self-appointed committee: Walter Davis, F. O. B., L. A.; Paul Penland, B. U. M. R. O. C. K.; Gus Hales, S. I. L. K. B. V. D.; Harry Adams, F. O. R. E. O. U. C. H.:

"Yours Disrespectfully, H. ROY KELLEY, President Pro-Tammany.

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NUMBER THREE

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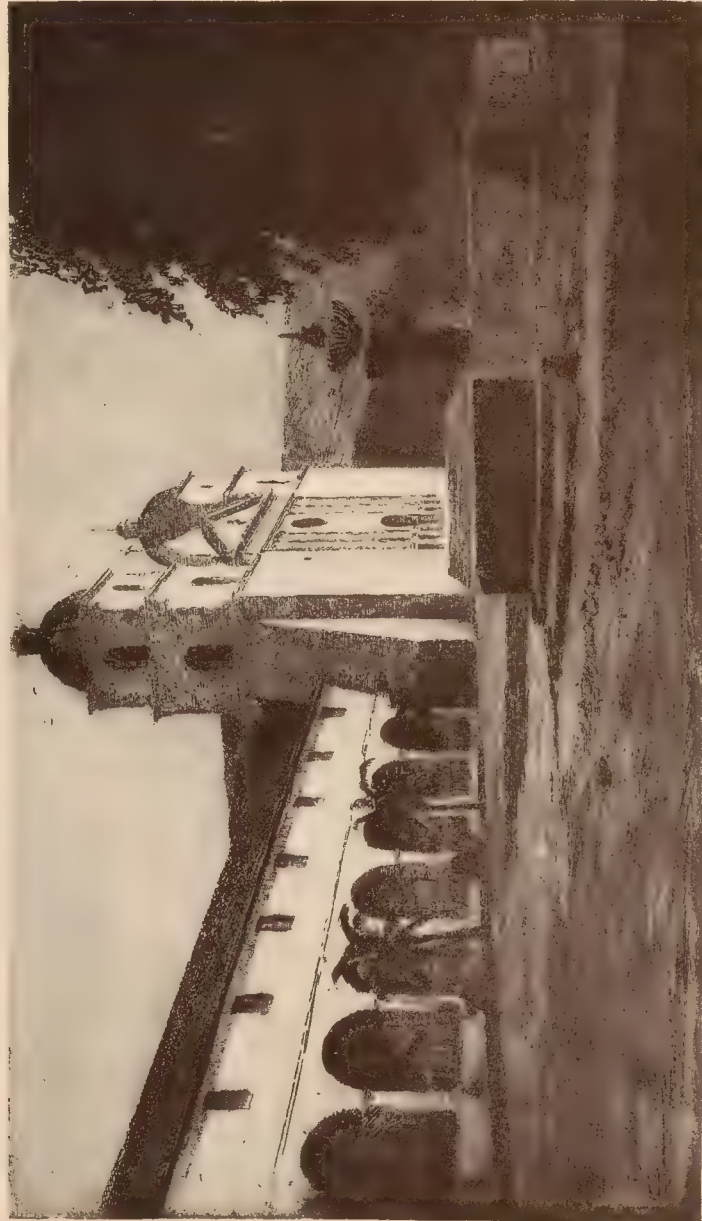
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THE SANTA BARBARA MISSION, AFTER AN ETCHING BY ED BOREIN



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VOLUME XXVIII · SAN FRANCISCO AND LOS ANGELES · SEPTEMBER, 1925 · NUMBER THREE

### CONSTRUCTION LESSONS FROM SANTA BARBARA

I

BY DR. BAILEY WILLIS, STANFORD UNIVERSITY  
President Seismological Society of America



ALO ALTO'S Chamber of Commerce has taken the first step toward providing that buildings shall be erected in a manner calculated to provide safety in case of an earthquake. So far as is known this is the first step not only in this particular case, but the first of its kind taken by any community in California. The Committee on Safety and Fire Prevention, at a

meeting held on July 24th, adopted the provisions published below and forwarded them to the directors of the Chamber with recommendation for favorable action.

It was fully realized that if adopted by the city council as a part of the building code these regulations would materially affect the conditions of construction within their jurisdiction. They were, therefore, thoroughly discussed with reference to the policy they involve in recognizing the earthquake risk as well as with regard to the additional costs, which might be occasioned. The opinion of the committee might be summed up in the phrase that it is better to be safe than sorry.

The proposed regulations, as they stand, represent the kernel of much discussion. They have been stripped of details and specifications in order that they might express a group of general principles instead of presenting a list of special requirements. They may also be said to be a by-product of the deliberations of the Committee on Building for Safety against Earthquakes, which was organized under the auspices of the Seismological Society of America about a year ago. That committee is made up as follows:

American Institute of Architects: Mr. Sumner Hunt, of Los Angeles.

Board of Fire Underwriters of the Pacific: Mr. Thos. McCaughern.

City of San Francisco: Mr. R. P. McIntosh, Bureau of Public Works.

City of Los Angeles: Mr. C. T. Manwaring, of the Committee on Safety and Fire Prevention of the Chamber of Commerce.

National Board of Fire Underwriters: Mr. R. E. Andrews, Assistant Chief Engineer, San Francisco.

Seismological Society of America: Mr. Robert Anderson, Professor S. D. Townley, Secretary, and Dr. Bailey Willis, Chairman.

Society of American Civil Engineers: Mr. Henry Dewell, San Francisco.

The committee has had several meetings and has a report in preparation. In its deliberations it has taken advantage of the experience afforded by the Chilean shock of November 10, 1922, of the significant effects of the Tokyo earthquake, and now of those of the Santa Barbara incident. It is not, however, responsible for the draft of provisions adopted by the Palo Alto committee. That

was originally prepared by three Stanford men, Professor C. D. Marx, Professor C. B. Wing, and Dr. Bailey Willis. It was then submitted to some of the most eminent engineers and architects of San Francisco and Los Angeles, and has been modified to meet their criticisms. It will no doubt meet with further criticism and is likely to be amended to suit various local conditions. It represents, however, a sincere effort to provide a basis for better building with reference to the earthquake hazard.

#### PROPOSED ADDITION TO A BUILDING CODE SECURITY AGAINST EARTHQUAKES

Provisions for security against the effects of earthquake shocks and vibrations shall be incorporated in all structures built under this code in the manner specified in the following paragraphs. The provisions here stated shall govern in case of any difference of interpretation between this and other sections of the code.

**Foundation material.** The natural material upon which the foundations of a structure stand shall be known as the foundation material and shall be classed under one of three types, according to its nature, namely (1) firm rock; (2) hardpan, gravel, and sand in the natural bed; (3) adobe, muck and made ground.

**Earthquake force.** The earthquake force shall be taken as a horizontal force acting at the base of the foundations with an intensity dependent in any case upon the nature of the foundation material. The following intensities shall be taken as the minimum factors to be used in calculating the stresses that will be set up on the foundation and superstructure.

Foundation material	Intensity Rossi-Foré	Acceleration feet per sec. per sec.	Lateral pressure per sq. ft. of ver- tical area above ground
(1) Firm rock.....	VIII	3	20
(2) Hardpan, gravel and sand.....	IX	5	30
(3) Muck or made ground	X	7	45

**Use of the table.** Calculations of the stresses that will be imposed by the earthquake force may be based either on the acceleration per second per second or on the lateral pressure per square foot. In most cases the two methods of calculation give different results. If the acceleration be used the mass of the building is involved as a factor in the moment of inertia; if lateral pressure per square foot be used it is the area of the side that is involved. For a building of large mass but small area the acceleration will give the larger stresses and demand the stronger construction. For a building of small mass and large area the lateral pressure will give the larger stresses and demand firmer bracing. That expression for the earthquake force, either acceleration or lateral pressure, which requires the stronger structure shall be used. The figures for the acceleration represent the minimum earthquake force which can safely be assumed as determined from observations on structures in the California earthquake of 1906. The figures for lateral pressure are based on the estimates of the Committee which represented the Society of American Civil Engineers in the investigation of the same shock.

**Bearing walls.** Bearing walls are permissible to a height of 45 feet on foundation materials 1 and 2, but shall not exceed 30 feet in height on foundation materials of class 3.

**Materials and bonding.** All materials and construction shall be of the highest quality, as required under the terms of this ordinance. The structure and its parts shall be firmly tied together. In all cases the bonds shall be calculated to resist the stress that will be set up by the inertia of the mass moving with the acceleration corresponding to the foundation material as specified in the preceding table, or the stress corresponding to the equivalent lateral pressure.

[Concluded on page 53]

## PROPER CONSTRUCTION IS CALIFORNIA'S NEED

BY MARK C. COHN

*Consultant to Pacific Coast Building Officials' Conference*

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SANTA BARBARA'S recent experience has again aroused public consciousness to the need for safeguarding against the action of the elements. Earthquakes make their unbidden appearance, but not entirely without warning, for learned scientists see nothing unusual in this phenomenon and calmly predict temblors with an uncanny degree of accuracy.

The earthquakes in Santa Barbara, although more severe than the slight tremors reported daily throughout the world, caused very few fatalities. Only twelve deaths have been reported.

In comparison, in very large centers of population many fatalities occur from automobile accidents every week-end. Fire underwriters' reports show approximately forty deaths from fire every twenty-four hours and a greater number maimed and injured.

The actual property damage in Santa Barbara compares favorably with property losses caused by fires every month in America. And here is an important fact: the majority of fires actually are preventable, but earthquake prevention is still more or less a thing of conjecture. Yet an analysis of underwriters' reports shows a loss of more than \$1,400,000 every twenty-four hours from fires.

Hysteria and exaggeration usually accompany and follow an earthquake. This state of mind too often prevails whenever an accident or catastrophe occurs. At this time calm thinking and calm action are essential. Unwise enactments imposing theoretical regulations may restrict freedom of construction to a harmful degree.

If history repeats itself, the temblor in Santa Barbara

will prove little more than a disturbing ripple so far as the progress of California is concerned. Comparatively few buildings suffered real material damage. Comparable with the spirit displayed in San Francisco in 1906, the city of Santa Barbara already is being rebuilt. And again, should history repeat itself, the new city will be built better and bigger than before.

Yet this jolt furnishes an object lesson of the need for better and safer building construction. Professor Bailey Willis of Stanford University says it is not a matter of materials but a matter of proper design that will make for practically earthquake-proof buildings. From all reports this contention is borne out by the Santa Barbara earthquake.

All types of construction, properly designed and with ample foundations and footings, withstood the temblor in reasonably good shape. Regardless of the materials used or the particular type of construction employed the damage was about the same in every building which violated established fundamentals of design and good construction. "Jerry" building and lack of field inspection are bound to make for failures in the case of earth movements.

There is ample evidence that an earthquake fault extends through a strip of California reaching from nearly one end of the state to the other. The problem, therefore, becomes a state affair rather than merely one for each municipality to grapple. To safeguard against earthquake damage, all Pacific Coast cities in their building operations must co-ordinate action through building inspection agencies. This is not the time for unsupported theories from persons and interests unqualified to make recommendations dispassionately, or persons prejudiced in favor of particular types of construction or materials in which they may have a direct or indirect interest.

## AVOID FAULTY BUILDING, SAY ENGINEERS

BY HOWARD G. HANVEY

PACIFIC COAST cities should launch at once a campaign of education that would safeguard San Francisco and other metropolitan areas from such losses as were sustained by Santa Barbara during the recent earth tremor.

This is the assertion of J. G. Little, head of the J. G. Little Company of San Francisco, consulting engineers who, with H. J. Brunnier and T. Ronneberg, two other engineers of prominence in San Francisco, has just completed an extensive survey of the effect of the quake on modern construction.

Mr. Little was for years consulting structural engineer of the Bureau of Building Inspection of San Francisco, and is chief engineer of the Antioch and the proposed San Francisco-Alameda bridges. Mr. Brunnier was consulting engineer of the Standard Oil Building of San Francisco, and Ronneberg of the new Pacific Telephone and Telegraph Building of the same city.

"A similar earth tremor would not have wrought nearly the damage in San Francisco that Santa Barbara sustained," said Mr. Little. "There are buildings in San Francisco, however, which through faulty construction, would suffer. Such modern steel buildings, however, as

the Standard Oil and Telephone Building would not be injured.

"The greatest cause of damage we believe in Santa Barbara was due to faulty methods of construction. The Post Office Building, however, which is a modern steel frame structure, and the only one in Santa Barbara, passed through the shocks which toppled around it buildings less resistant to earth shocks.

"San Francisco has just adopted one of the most modern steel construction building codes used by any city. It was advocated by the California Institute of Steel Construction and formulated by a special committee of some of the most eminent of America's engineers for the American Institute of Steel Construction.

"Owners constructing buildings honestly in accordance with this code need fear no loss from earthquakes of the character that visited Santa Barbara.

"We are convinced that if there was only some way to educate the public as to the necessity for engaging competent engineers and architects who would insure proper design from a structural point of view, and skilled supervision as to materials and details of construction, there would be nothing to fear from any earth shocks."



## A CATHEDRAL OF LEARNING



EARLY in October ground will be broken for the 52-story "Cathedral of Learning" for the University of Pittsburgh. Three years will see the completion of this unique Gothic structure, 260 by 360 feet at its base, soaring to a height of 680 feet, high above the thousand Pittsburgh factories and hills.

The structure which will serve as the central building for the University, will accommodate 12,000 students. It will house all of the departments of the University except those of medicine and dentistry. It will provide class rooms, libraries, laboratories, shops and recreational centers for students and faculty.

The "Cathedral of Learning" is the culmination of Chancellor John G. Bowman's vision of creating a great urban University which will reflect the virile spirit of achievement of Pittsburgh. The up-rising masses of the building express forcibly the striving and the hope that should be a University's. At the same time the memorial classroom, laboratories, libraries and tablets will keep vivid the lives of those who have made Pittsburgh more than a center of wealth and industry. To execute this plan of Chancellor Bowman, Mr. Charles Z. Klauder, an outstanding student of Gothic collegiate architecture in this country, was chosen.

A University Citizens' Committee, broadly representative of the district's interests, assumed the responsibility of raising the \$10,000,000 necessary to build the "Cathedral of Learning." In an intensive solicitation for contributions to the University's building fund, extending over a period of two months, more than \$7,000,000 has been raised, practically entirely in the Pittsburgh district.

This sum represents more than 8,000 separate subscriptions from industrial corporations, mercantile establishments, financial institutions and individuals. No comparable sum has ever been raised in the community for any other purposes through voluntary solicitation except for the late war loans. Practically ever interest in the district has supported the enterprise. Alumni raised \$1,000,000. Students and faculty members pledged nearly \$400,000. Ninety-three thousand Pittsburgh school children contributed ten cents each of money earned by themselves.

Several million dollars remain yet to be raised. This task will be accomplished and entirely completed by fall.

The cost of high construction per cubic foot is somewhat higher than for low structures. This greater cost is largely offset by a greater percentage of effective area obtainable in the high building. High construction offers better ventilation, better light, less noise and less dust. The cost of heat, upkeep and janitorial service favors high construction. The saving in land for building space has been estimated at approximately \$2,000,000.

Tenney & Ohmes, of New York, and Stone & Webster, of Boston, two of the country's outstanding engineering firms, have declared the structure entirely practicable and without any unusual problems of construction.

Educationally the "Cathedral of Learning" is to be as unique, as significant, as it is architecturally. There is not to be a single barren, ugly recitation room. Rows of chairs are to disappear. It is planned to make each room beautiful. They are to resemble private studios. The chairs are not to be alike. The best chair is to be occupied by the teacher, not by virtue of his position but by virtue of his integrity, his character, his intelligence and the high motive of his life. Good pictures are to hang upon the walls.

Of all the means at the disposal of an architect by which to convey active emotions, those of mass and proportion are most effective. In fact, any tremendous or powerful rush of feeling expressed through architecture is much dependent upon them. A building, therefore, let us say four stories high, is incapable of supreme expression of power in action because it cannot offer this free sweep to the imagination.

The University desires, now, as already stated, to interpret by its proposed building the active emotions of courage, daring, achievement, together with spiritual aspiration. How can this be done? First, the use of mass and proportion is imperative. This use requires height. Mere size will not "ennoble a mean design, yet every increase of magnitude will bestow upon it a certain degree of nobleness," says Ruskin.

"No architect in all history," said Mr. Klauder, when he first undertook the design, "was ever before given such an opportunity. The use of mass and proportion is unlimited; ornamentation is scarcely needed at all; and the whole structure is unhampered by its surroundings."

## SANTA BARBARA AND THE BRICK INDUSTRY

SANTA BARBARA has been the Mecca for everyone interested in the building industry, affording opportunity to study the effect of the unusual.

That it has been the subject of study by national associations is natural and the monthly digest of conditions in the common brick industry, prepared by the Common Brick Manufacturers of America, is devoted to a brief discussion. The report says:

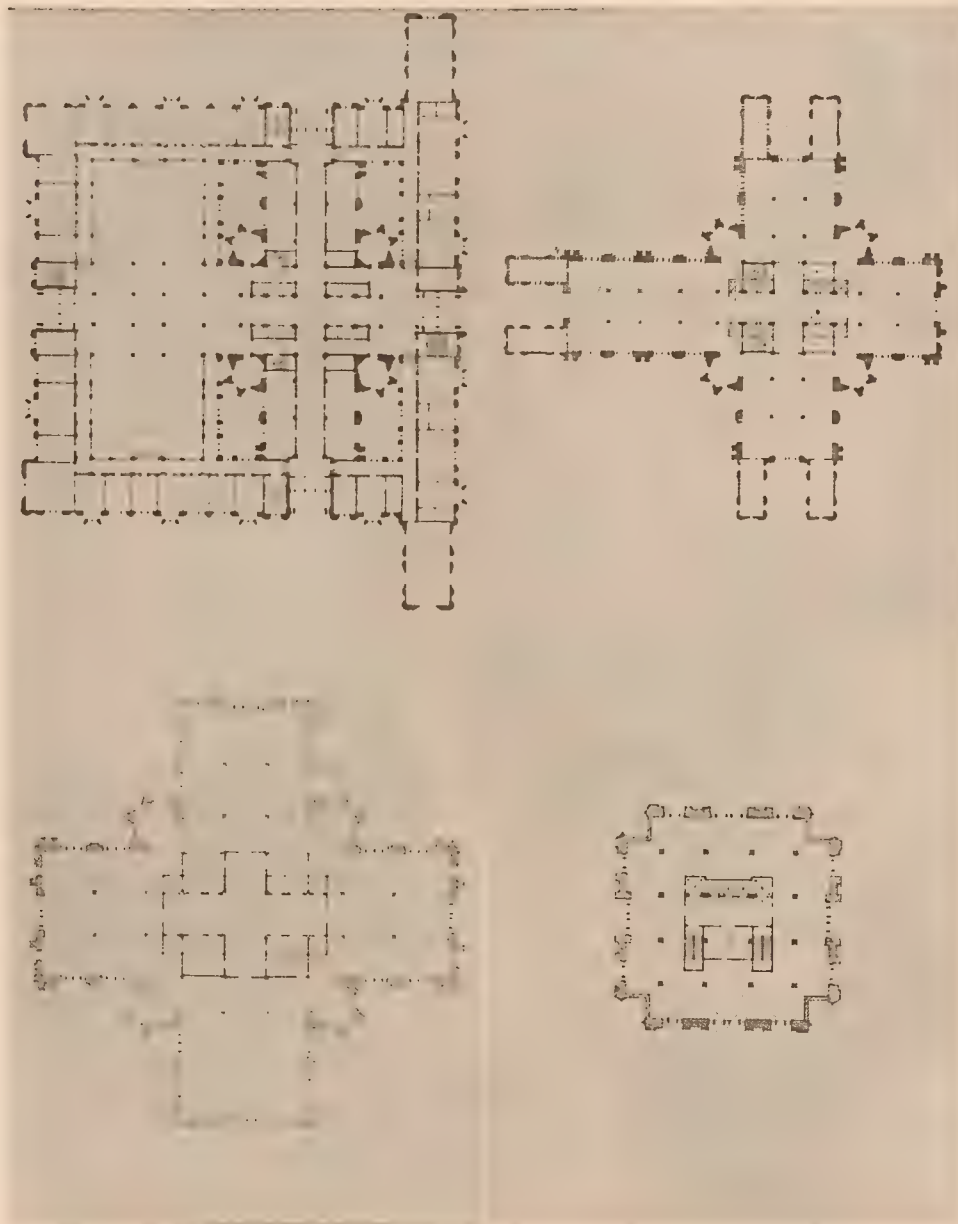
"The lesson of the earthquake in Santa Barbara is that good, honest brickwork will withstand even a very severe tremor without damage. Early reports from Santa Barbara were misleading, and naturally so, because it appeared that many brick buildings had been wrecked.

"Perhaps no disaster has been more thoroughly and carefully investigated by experts than has that at Santa Barbara, and from these investigations there comes unanimously this lesson: Good construction of practically every kind withstood the shock. Inferior construction, regardless of the materials used is unsuited to earthquake zones. In the very heart of the business section of Santa

Barbara, where the greatest damage was done, there stand today solid brick wall structures that are wholly undamaged.

"The brick industry in the future will put special emphasis on these points: (1) Cross walls tied or bonded thoroughly to the mainwalls. (2) Proper ties and anchors at floor and roof lines. (3) The use of strong mortar. (4) Braces for all walls extending above the roof line. (5) And the thorough wetting of brick prior to being placed in the wall.

"Fourteen secretaries of the group associations affiliated with The Common Brick Manufacturers' Association of America met in conference at Cleveland on July 23rd and 24th to study engineers' reports from both the Montana and Santa Barbara earthquakes. These group associations, covering nearly the entire country, will work in unison in promoting better brickwork and actively pursue a relentless campaign against the 'jerry' builder, and all others who sacrifice safety and permanency to cost."



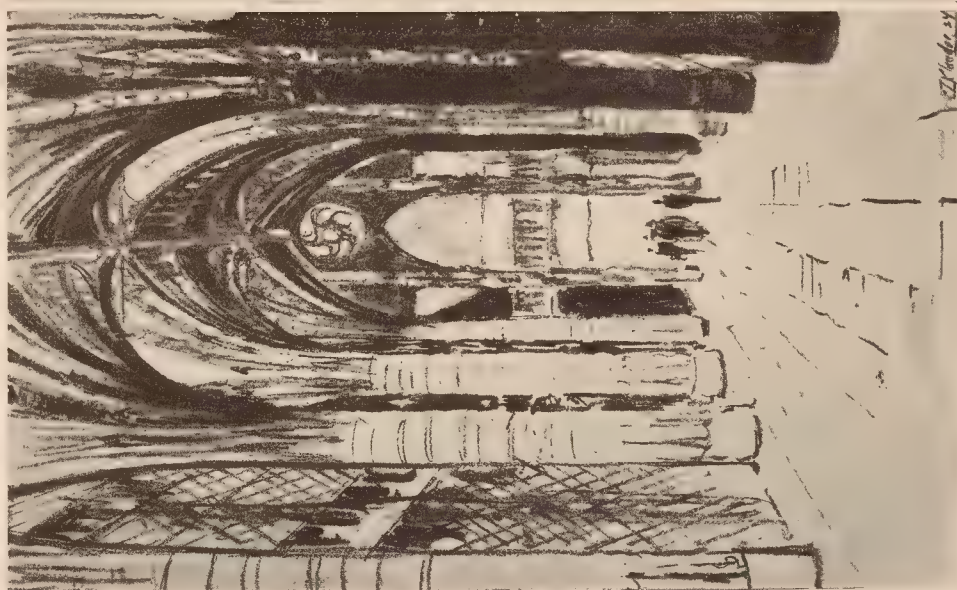
FIRST FLOOR PLAN  
 ELEVENTH TO THIRTIETH FLOOR PLANS  
 "CATHEDRAL OF LEARNING," PITTSBURGH, PENNSYLVANIA. CHARLES Z. KLAUDER, ARCHITECT

FIFTH TO TENTH FLOOR PLANS  
 THIRTY-FIRST TO FORTIETH FLOOR PLANS





THE "CATHEDRAL OF LEARNING," UNIVERSITY OF PITTSBURGH, PENNSYLVANIA. CHARLES Z. KLAUDER, ARCHITECT



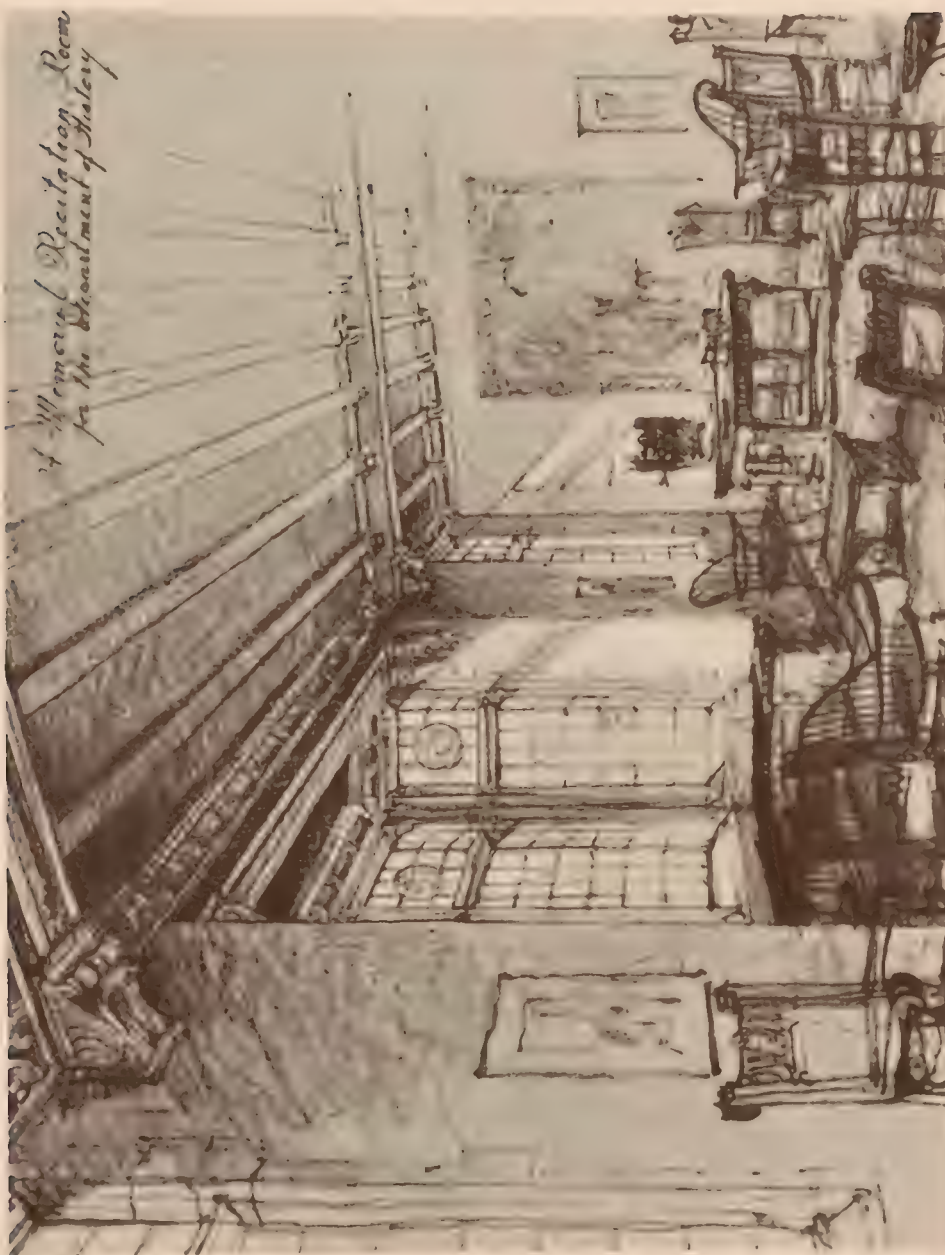
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ARCHITECT

## *What Price Craftsmanship?*

IN PAINTING AND DECORATING, WHAT IS THE MONEY COST OF THAT MUCH-FOUGHT AND ELUSIVE INGREDIENT CALLED CRAFTSMANSHIP? IT IS NOT A MATTER OF PRICE. IT IS A MATTER OF EXPERIENCE. FINE WORK AND QUALITY WORKMANSHIP COST NO MORE THAN THE OTHER KIND. IN THE LONG RUN, THEY COST LESS. DOING GOOD WORK WELL IS MORE THAN AN IDEAL WITH US—IT IS AN OBLIGATION AND A TRADITION FORTY YEARS OLD. SO, TODAY YOU WILL FIND MORE THAN A HUNDRED QUANDT CRAFTSMEN BUSY NOT ONLY IN LARGE APARTMENTS, PUBLIC BUILDINGS, HOTELS, SCHOOLS, MUSEUMS, BUT IN FACTORIES, SMALL HOMES—WHEREVER THERE IS A DEMAND FOR BETTER PAINTING. BE THE CONTRACT LARGE OR SMALL, THE COST GREAT OR TRIFLING, WE ADD CRAFTSMANSHIP TO EVERY JOB WE DO. THAT'S WHY WE ENJOY THE CONFIDENCE OF SO MANY ARCHITECTS AND BUILDERS.

*"Co-operation for Quality"*

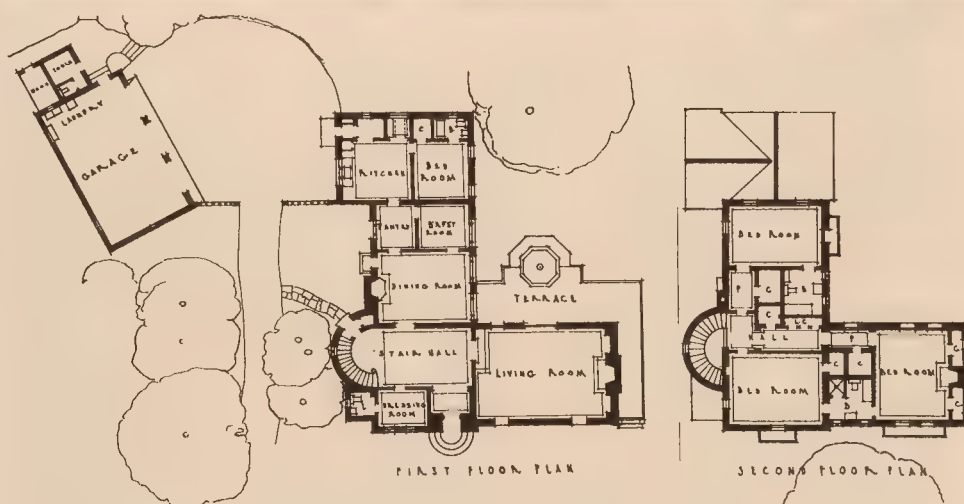
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HOUSE FOR MR. O. N. GABRIEL, SAN MARINO, CALIFORNIA. ROLAND E. COATE, ARCHITECT, LOS ANGELES, CALIFORNIA



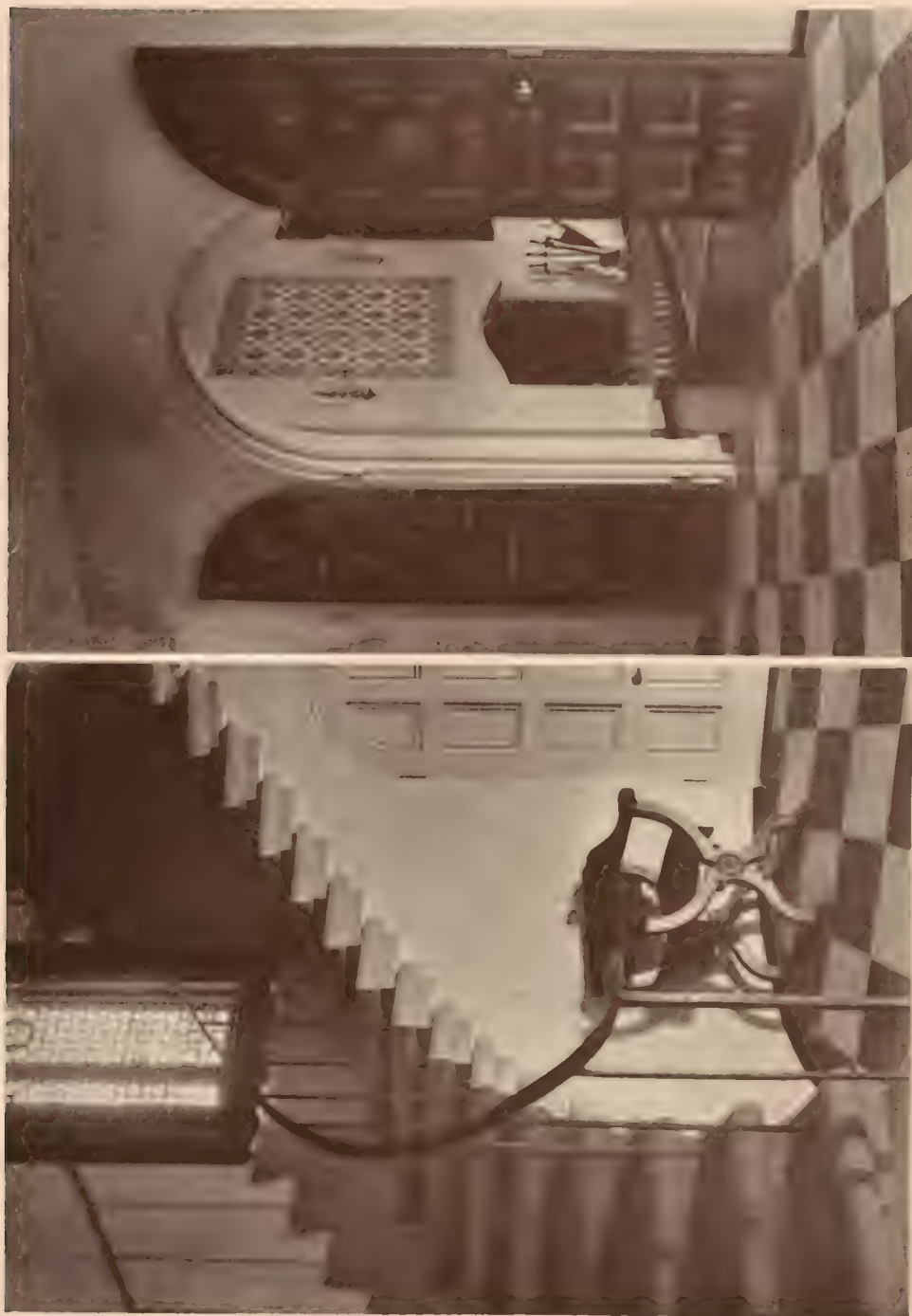
EXTERIORS, RESIDENCE OF MR. O. N. GABRIEL, SAN MARINO, CALIFORNIA. ROLAND E. COATE, ARCHITECT, LOS ANGELES

Photographs by Miles Berne





RESIDENCE OF MR. O. N. GABRIEL, SAN MARINO, CALIFORNIA. ROLAND E. COATE, ARCHITECT, LOS ANGELES, CALIFORNIA



INTERIORS, RESIDENCE OF MR. O. N. GABRIEL, SAN MARINO, CALIFORNIA. ROLAND E. COATE, ARCHITECT, LOS ANGELES

Photographs by Miles Berne





INTERIORS, RESIDENCE OF MR. O. N. GABRILL, SAN MARINO, CALIFORNIA. ROLAND E. COATE, ARCHITECT, LOS ANGELES. CEILING DECORATED BY JOHN S. MERALDI





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# HARMONIZING HOUSE AND GROUNDS

BY DOROTHEA DE MERITTE DUNLEA

*In Collaboration with A. E. Hanson, Landscape Architect*



HOUSE and garden joining in friendly fashion—that is the desire of the builder, the gardener, and the home lover who appreciates the beautiful. And as the grounds may be the making of the house, so in turn may the house help to make the garden and grounds distinctive and pleasing, each complementing the other if—and the “if” is all-important for it means fitness, complete harmony, between the dwelling and its surroundings.

Usually the house is built first, though many a beautiful home-lover with a house and garden paradise pictured in his eye plots out certain definite details in the grounds before even a batten is driven. And the architect, who understands the relation between the setting and the structure, will aid in placing the house most advantageously on its site. He will also keep in mind the proper balance between house and grounds, that it may not be termed—as one place was—“the all house.”

After the house is up and finished, architecturally speaking, the grounds will claim attention, and to be successfully handled, must be studied with several points in view. The size of the land will be one of the first considerations—the spaces available for lawns, gardens, walks, drives, and possibly other features desired. The small or moderate sized city lot will demand the most careful planning, for it is a temptation to include many details and features which may tend to overcrowd the grounds, and make it a hodge-podge, unrelated to the house. Simplicity in treatment is always a wise rule for small areas. And delightfully true is it, that simplicity often creates an air of spaciousness.

The large place, by reason of its extensive lands, may

choose, however, to work out an elaborate setting for the house. And this will be justified if it is in perfect keeping with the dwelling.

Then shall the grounds be treated formally or informally? This will depend upon the house to a large degree if



A. E. HANSON, KEW GARDENS, LOS ANGELES  
LANDSCAPE ARCHITECT



A. E. HANSON, KEW GARDENS, LOS ANGELES  
LANDSCAPE ARCHITECT

harmony is to be achieved. The rustic type of home, low and rambling, shingled perhaps or rock trimmed, will immediately suggest informal treatment for the surroundings. The house of conservative Colonial lines or the magnificent plaster dwelling of Italian trend may on the other hand demand formal treatment. Recognition of the period or the style of architecture is therefore another of the important factors in harmonizing house and grounds attractively.

“Playing up” the gardens and grounds true to type enhances the house and emphasizes the beauty of surroundings. It is the emphasis of type that most frequently calls forth admiration whether it is the little peasant cottage set amidst flowers, or the castle flanked by lawns and stately trees. Points that bring out the individuality of a home should be stressed in every detail of the architectural and planting schemes.

By repetition of lines, forms and colors this effect may be obtained, and at times, contrast will bring out desirable points in house and garden. The selection of such features as walks, drives, walls, gates and arbors, and a right choice of plants is therefore next to be undertaken, as a means of creating harmony between house and grounds. Such features as a summer house, a pool or a friendly seat may be built to reflect the style of the house in the grounds. Garden walls of the same material and finish as the house, gates that match the trim of doors and windows, walks paved like terrace and porch, all help to tie the house and grounds together.

In the planting scheme, there is no better beginning

(Concluded on page 48)



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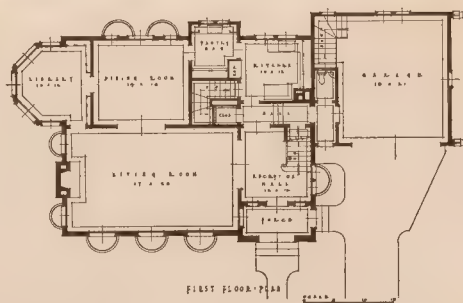
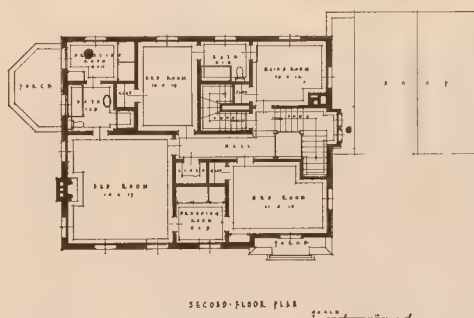
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SECOND FLOOR PLAN

FIRST FLOOR PLAN

ABOVE—EXTERIOR; BELOW—FLOOR PLANS, RESIDENCE OF MR. J. P. WHITMORE, SAN MARINO, CALIFORNIA  
KENNETH A. GORDON, ARCHITECT, PASADENA, CALIFORNIA



THE FRIDAY MORNING CLUB, LOS ANGELES, CALIFORNIA

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DINING ROOM, FROM LIVING ROOM, RESIDENCE OF MR. J. P. WHITMORE, SAN MARINO, CALIFORNIA  
KENNETH A. GORDON, ARCHITECT, PASADENA, CALIFORNIA



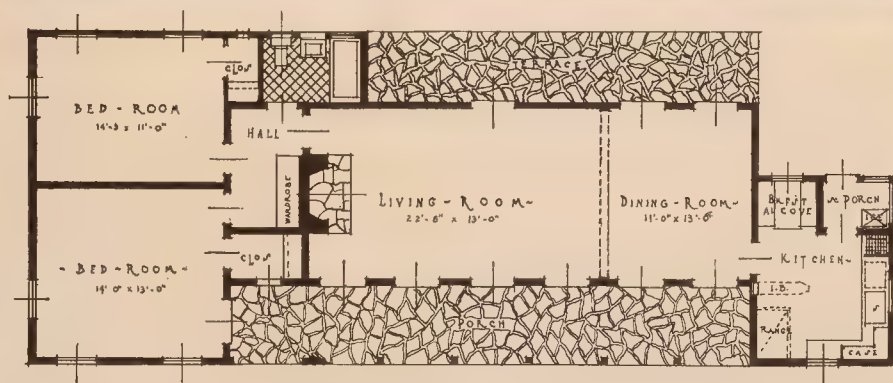
LEFT—STAIR HALL FROM LIVING ROOM; RIGHT—DEN FROM LIVING ROOM, RESIDENCE OF MR. J. P. WHITMORE, SAN MARINO, CALIFORNIA  
KENNETH A. GORDON, ARCHITECT, PASADENA, CALIFORNIA

Photographs by George D. Haight





ABOVE—LIVING ROOM, RESIDENCE OF MR. J. P. WHITMORE, SAN MARINO, CALIFORNIA; BELOW—DRAPERIES BY THE MANSFIELD SHOPS, WHITMORE HOME. KENNETH A. GORDON, ARCHITECT, PASADENA, CALIFORNIA



~ FIRST FLOOR PLAN ~

ABOVE—EXTERIOR; BELOW—FIRST FLOOR PLAN, RESIDENCE OF MR. MARLOWE MERRICK, LOS ANGELES, CALIFORNIA  
H. C. DECKBAR, ARCHITECT



## · EDITORIAL ·

### *Santa Barbara*

THE vast extent of damage done to building in Santa Barbara is still hardly realized. Perhaps it impresses a visitor more than it does the citizens, who are too busy to bother over spilt milk. They are hard at work planning a new city, which shall be not only better built, but more beautiful.

In both aims will be encountered opposition. Many owners have been hard hit financially, and will feel compelled to rebuild as cheaply as possible. Some will demand safe structural results but lack the vision to realize that beauty is really a commercial asset, and nowhere more directly so than in a city like Santa Barbara, whose unequaled setting of mountains and sea combines with its unique romantic traditions to make it a Mecca for visitors from all over the world.

Fortunately there is a large element in Santa Barbara of enlightened and energetic citizens. A modern Building Code had been adopted just before the earthquake, to which amendments are being prepared, based upon the reports of experts who have been examining the effects of the shock. A recent ordinance has instituted an Architectural Board of Review to advise the Inspector of Buildings as to the "Character of design, appropriateness, safety, sanitary arrangements and general construction" of all proposed buildings, and is functioning actively. The Plans and Planting Committee is ready with long-studied plans for community improvement, for which the opportunity now presents itself.

Every lover of Santa Barbara—and every lover of beauty must love Santa Barbara—is hoping that the city will seize this opportunity, persuade individual prejudice to join in the community program, and re-construct from its ruins a new Santa Barbara whose loveliness will become the pride of the West.

\* \* \*

### *What Value Material?*

AFTER spending several days in a careful inspection of the damage done by the Santa Barbara earthquake, and receiving the unavoidable conviction that several kinds of weak construction were responsible for much of the wreckage, still the outstanding cause can be put in three words—poor cement mixture.

Much can, and doubtless will be done in the way of devising construction to resist the

strains of earthquake shocks, but it will be of little avail unless the most stern and exacting conditions be required as to the quality of cement and the manner of mixing and pouring concrete. Every architect would profit by seeing for himself these results, so eloquent of laxness in the use of cement.

\* \* \*

### *California Spanish*

TO THE critic who inveighs against importing European architecture into this country, and who preaches developing a native style "to suit our own environment and our modern conditions," we recommend a study of such buildings as that shown in this issue, the house built for Mr. Gabriel, at San Marino, by Roland E. Coate. If this does not fit its environment and meet all the exacting conditions of American life, what could? It is hard to imagine a plan better adapted to the needs of a small family used to the refinements of modern living, better expressed in its outer envelope and its inner frame, more suitable to the balmy California climate, more quietly charming or possessing definitely that elusive quality architects call "character."



RESIDENCE OF MR. O. N. GABRIEL  
ROLAND E. COATE, ARCHITECT, LOS ANGELES, CALIFORNIA



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CALIFORNIA Pines are great aids to architect and builder in achieving permanent beauty of design. They can be depended upon to faithfully maintain original contours, lines and proportions because California Pines contract and expand very little. They do not bow, twist or swell when installed, a protection against the annoyances of windows that stick or rattle or admit draughts of cold air.

Frames and sash of California Pine, when properly made and installed give the utmost in service durability, especially because of their ability to readily take and hold paint—a most essential factor in securing beauty and long-life to the window parts.

You are invited to correspond freely with our Wood Technologist, formerly with the U. S. Government Forest Products Laboratory at Madison, Wisconsin and now connected with this association. He will gladly answer your inquiries or supply special data for specifications.

## California White and Sugar Pine Manufacturers Association

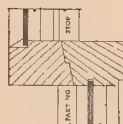
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Permanent and attractive painting effects are easily obtainable because of light color, smooth surface and freedom from grain-raising.

We have issued for architects and builders a set of California Pine Information Sheets covering all uses of these woods. These data sheets are compiled by our Wood Technologist. They are issued in convenient standard size, in a folder, ready for your files.



# HOW WELL DO YOU KNOW THE CALIFORNIA PINES?

BY CHARLES W. MEIGHAN



HE newspapermen who sent out by wire stories from Santa Barbara in the first hours of the recent disturbance in which they commented on frame buildings having come through the disaster without appreciable injury focused public attention on the value of lumber to the building industry.

Calmer and more authoritative reports from architects, engineers and other experts all seem to agree that whether houses were built of lumber, brick, concrete or any other material, if the design was correct and the workmanship honest, the structures withstood the shock.

But the fact can not be disregarded that a small proportion of the lay public reads the calmer conclusions of the experts, while the mass absorbs the first, hasty newspaper accounts and, subconsciously perhaps, acquires impressions to which it clings tenaciously. Nor can we deny that the public desire for lumber and frame construction has been stimulated to an extent, which no one can foretell with accuracy.

This brings to the fore the consideration of our own California pines and one can not visit the offices of the California White and Sugar Pine Manufacturers Association without being impressed by the fact that there are many things we at home on the Pacific Coast do not know about these two great species of trees.

Of course, we all know in a general way that the Sierra Nevada mountains, from the Oregon line south are heavily timbered. But how many are aware that government experts figure that there is about 320,000,000,000 feet—not million, but billion, mind you—standing in this region?

Did you know that although they have been cutting timber on a large scale in Texas, for example, for over thirty years, there is more virgin timber standing in California today—four times over—than there was in all the vast expanse of Texas before the first sawmill started to grind?

In addition to the huge Sierra Nevada range timber already mentioned, there is seventy billion feet of Redwood in Northeastern California. It is estimated that thirty-three billion feet of sugar pine stands in the great Sierra territory, and one hundred seventy billion of California white pine.

The sugar pine of California is easily the aristocrat of the pines, in size, texture, beauty and commercial value. It is called the *Pinus lambertiana*. The California white pine is scientifically known as *Pinus ponderosa*.

The difference between the two pines is about the difference between rich cream and rich milk, the sugar pine being the cream of the forest.

California white pine is white, soft, light, free from resinous substances and partaking very closely of the qualities of the old Michigan and Wisconsin pine. It is smaller than the sugar pine and contains a smaller percentage of clear lumber, is not quite as soft and cheese-like in the quality of the wood as the sugar pine.

Sugar pine stands on an average of from 150 to 175 feet in height and from 3 to 10 feet in thickness, although individual trees frequently reach much greater size. It is clear of limbs to a great height and is unusually free from blemish and disease.

It is possible to cut sugar pine boards and planks any width and thickness and to get soft, clear lumber such as no other pine can produce. It cuts as easily as cheese,

either with or across the grain, and is easily workable for any purpose. It is practically free from resinous substances, has no raised grain in the wood to work, dress, paint and enamel.

Present production of sugar pine is not more than 250,000,000 feet annually, and it is estimated that the present stand will last for 130 years. Replanting and re-growing of sugar pine are occupying the attention of the timber men of California and it is believed that these efforts will insure the supply, at the present rate of production, for at least 200 years.

California white pine is being cut at the rate of about 900,000,000 feet annually at present and the virgin stand of this timber is estimated to provide a supply for 200 years. Like sugar pine, California white pine can be had in boards of great width as well as thickness. Wooden counter tops are frequently made from it. It is free from smell, resin, raised grain, etc.

Both sugar and white pine possess almost the same physical properties, but for the most exacting requirements, sugar pine is given the preference.

The architect may build a house from roof to foundation with either California white pine or sugar pine, but for floors that will be subjected to heavy use, these woods are not recommended. The woods are both easy to handle, light to lift, easy to nail, easy to tack, easy to saw, easy to split. They are straight-grained, contain no substances that interfere with paint or varnish and are a delight to carpenter, mill-worker and painter.

From both of these California pines are manufactured sashes, doors, trim, mouldings, interior finish, exterior finish and trim, columns, panels, frames, ceiling, partition, sheathing, forms, furniture, bee-hives, factory stock of all kinds that requires light, soft, easily workable woods.

Sugar pine is extensively used in the building of pianos and organs. Most piano keys are made of this stock. It is incomparable for drain boards and for similar purposes, as it does not swell or warp. It is preferred for ship decking for the same reasons.

With the development of California sawmills, California pine is now perfectly manufactured, dried, dressed and prepared for market. The writer recently enjoyed a trip over the logging road of the Standard Lumber Company, into the Sierras from Sonora, and the inspection of this great plant, operating its own railroads, hotels, mills and accessories was a revelation of an orderly empire within an empire. Several of the California mills are the largest in the world from a standpoint of the money invested in the mill properties themselves. Needless to say, there is nothing crude about the California pine or the mills producing it for a market which has spread to a great degree in recent years.

The California White and Sugar Pine Manufacturers Association has its offices in the Call Building, in San Francisco, and there maintains a most efficient organization. Its members produce something like 85 per cent of all the pine cut in its trade territory.

C. Stowell Smith, the secretary, is gifted and experienced for the work he is doing. Other officers who have done so much to make the Association a success are:

R. D. Baker, president; G. D. Oliver, vice-president; E. H. Cox, treasurer; A. S. Titus, traffic manager; Austin L. Black, advertising manager; E. P. Ivory, manager of trade extension.

Activities of the Association include handling the grading and inspection of the lumber produced; working for and creating uniformity in producing, gathering and

(Concluded on page 49)



New Club House, Olympic Golf and Country Club, Lakeside  
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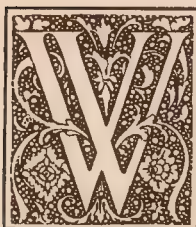
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## SNAP JUDGMENTS UNFAIR TO BUILDING INDUSTRY

• BY K. M. GRIER •

*Executive Representative, Blue Diamond Company, Los Angeles, California*



WELL, I guess they won't build any more brick buildings in Santa Barbara!

That's what a friend said to us over the telephone less than forty-eight hours after the Santa Barbara earthquake.

Had such a remark come from some erratic, mentally irresponsible person, we should have allowed it to pass without challenge. But we happened to know this man fairly well and knew that he should be better informed. It was hard to connect him with a statement so utterly ridiculous.

We decided to pay him a visit, and this is what we told him, in substance:

Blue Diamond is not in the brick business in any capacity. Neither were any of our materials damaged in the quake. But we are interested in the building industry as a whole. We want to see every commodity and every class of construction fairly judged and not made the victim of spontaneous prejudice, created by the fear and hysteria of a great calamity.

Unfortunately, bias and false conclusions rise quickly on the heels of any disaster. Haste too often closes the door to facts and permits unwise and unjust decisions.

But who is the authority that dares, in haste, to condemn the mighty record of service enjoyed by masonry construction for more than five thousand years?

Italy, for a single example, has been rocked by violent earth tremors for centuries. Yet Italy continues to build, and build safely, with brick. There are many buildings in the quake zones of Europe which have withstood earth shocks of the utmost violence for hundreds of years. They are standing today—monuments to the durability and safety of good masonry construction.

The ancient Romans had no advantages over present-day materials or craftsmanship. They merely saw to it that designs were sound, bricks were solid, their lime mortar correctly prepared, and the necessary bonds and ties provided to insure everlasting permanence. Those factors are all that are required today.

Poor designs, poor workmanship or careless preparation of materials, *regardless of the type of construction*, would have proved disastrous at Santa Barbara. And they will prove unsafe always.

From the ruins of Santa Barbara will rise a safer and more beautiful city. But its reconstruction will be based upon sound designs, good materials and honest workmanship.

And, with its future left in the hands of competent architects, engineers and building experts, brick will receive its just share of recognition. Such men achieve success by dealing with the truth. They will not permit gossip or emotional prejudice to influence them against a type of construction that has endured successfully for thousands of years, and will endure for thousands more.

## OCEAN PARK CONSTRUCTION RAPID

• BY A. R. ROBERTSON •

IN THE construction of the Egyptian Ballroom and amusement pier at Ocean Park, Santa Monica, Calif., which is said to be the largest ocean pier on either coast devoted entirely to amusement purposes, unusual methods were employed by the Cowles-Perrine Organization of Los Angeles, architects and engineers, acting for the Ocean Park Realty Corporation.

Two chief objects were sought: rapid erection and fire-safety. When plans got under way in March, it was intended to start building the superstructure April 15 and to have the pier complete on May 30, ready for the earliest summer tourists.

But considerable delay was experienced in driving the piles which form the base for the building, so that erection of the steel did not begin until May 18. The date then set for completion was July 4, and a system of construction was employed which, it was believed, would make that possible. The plan succeeded; formal opening, with all the main buildings complete, even to the finished decoration, took place June 27.

Fire-safety was guaranteed, not only by the fact that the main structure was built entirely of fireproof ma-

terials, but also by the demand which the Ocean Park Realty Company made upon all concessionaires, that they also employ materials of the same kind.

The main structure consists of the Egyptian Ballroom, with billiard hall, bowling alleys and electrical transformer-room adjoining. There are some forty concession-buildings, of which the principal are the Carousel and the Fun House, the latter owned by G. M. Jones of Los Angeles. All these are set on a reinforced concrete floor-deck, 12 inches thick, 1200 feet long and 240 feet wide, supported by wooden piles and built-up girders.

All walls and partitions of the main buildings were erected of structolite concrete, a mixture of structural gypsum with gravel and sand. In the ballroom there are 70,000 square feet of this construction.

Exterior walls and bearing partitions are 6 inches thick. On the outside, welded steel fabric was stapled directly to the walls to form a reinforcement for the exterior facing of stucco. This gypsum material was poured in metal forms. In keeping with the Egyptian style of the design, the walls are battered one-half inch per foot of height.

Over the entire structure a roof of Sheetrock-Pyrofill

(Concluded on page 49)



Ultimate seating capacity of the Stadium, 75,000. South end, as shown in photograph of working model, is planned as the site of a memorial to the Chicago men who lost their lives in the World War.

Architects: Holabird & Roche, Chicago. Engineer: Lynn J. White of the South Park Commissioners, Chicago. Contractors: Blome-Sineh Construction Co., Chicago.

Cut cast stone supplied by Benedict Stone Corporation, New York, Chicago, Montreal.

## Ancient Greece in Modern Concrete

To those who still believe that the architectural beauty of the ancients can be expressed only in traditional materials, Grant Park Stadium, Chicago, will be a revelation.

This monumental structure takes you back to "the glory that was Greece." And it is done entirely in concrete. This includes the columns and other exterior architectural details, all of which are of cut cast stone. Thus beauty, as well as construction, is made permanent.

Grant Park Stadium is only one of a great variety of structures that impressively demonstrate the wide range of adaptability concrete offers to the architect—a range not within the possibilities of any other material.

\* \* \*

If you are interested in receiving additional data on concrete in stadium construction, address the nearest office listed below. Ask for leaflets S-112 and S-104.

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*Enameled Plumbing Ware*



*Tomb of Annia Regilla, the so-called Tempio Del Dio Redicolo*

## Has Stood Eighteen Centuries in Quaking Italy —because it was well built

A WEALTHY Greek promoter and rhetorician built on his estate, between the Appian and Latin Ways outside the walls of ancient Rome, a beautiful brick tomb to his beloved wife, Annia Regilla, eighteen centuries ago, when the thorough and artistic methods of bricklaying characteristic of Hadrian's day were still practiced.

In spite of innumerable earthquake shocks, such as California has never ex-

perienced, in spite of floods and storms, in spite of attacks and sieges, this structure with its brick facing properly bonded to the masonry backing stands today practically what it was when originally built in the second century of our era, except for the depredations of man.

By Frost, nor Fire, nor Flood, nor Time, nor even Earthquake Shock—when built right—are well burned Clay Structures destroyed.





*Side Detail of the Tomb of Annia Regilla*

*On one side of the tomb, the two rectangular pilasters are replaced by semicircular niches in which are set half octagonal columns. Pilasters and columns which rest on Attic bases and terminate in Corinthian capitals, chiseled*

*out of the brick, are of a beautiful clear red, while the field of the building is of a yellowish ochre tone. The thin brick which are laid in a knife edge joint and in perfect alignment are of the finest quality.*

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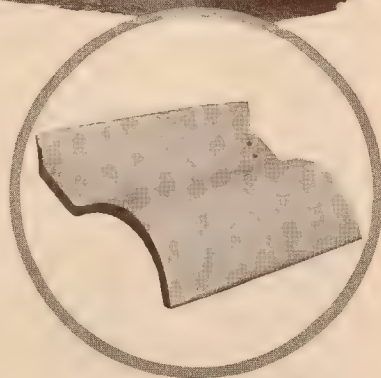
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Brick never grows old. But like every good thing, brick loses its value when not properly used. Santa Barbara has demonstrated that there is no material or type of construction that can survive shoddy work or faulty designing. Permanent construction comes only when sound materials are employed by capable workmen under strict regulation and supervision.

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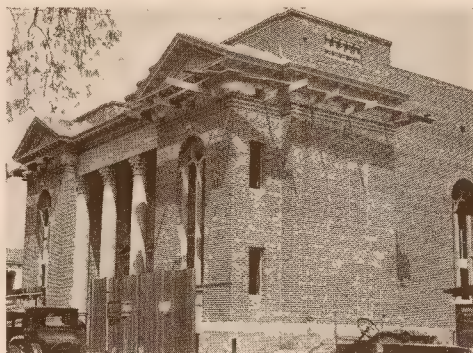
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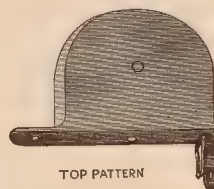
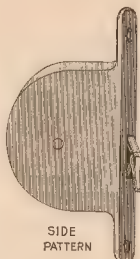
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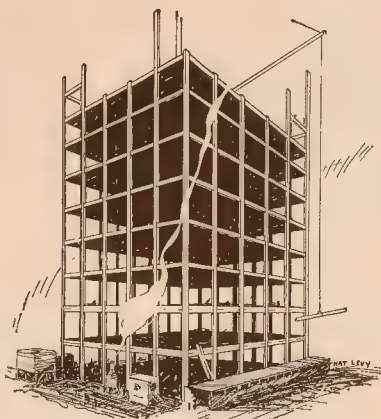
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THE great plant of the Moore Dry Dock Company, which supplied the steel sinews for hundreds of ships during the World War, has for the past year also been fabricating steel for industrial purposes.

With our overhead carried by marine repairs, we are in a position to make low bids on structural steel for all building projects.

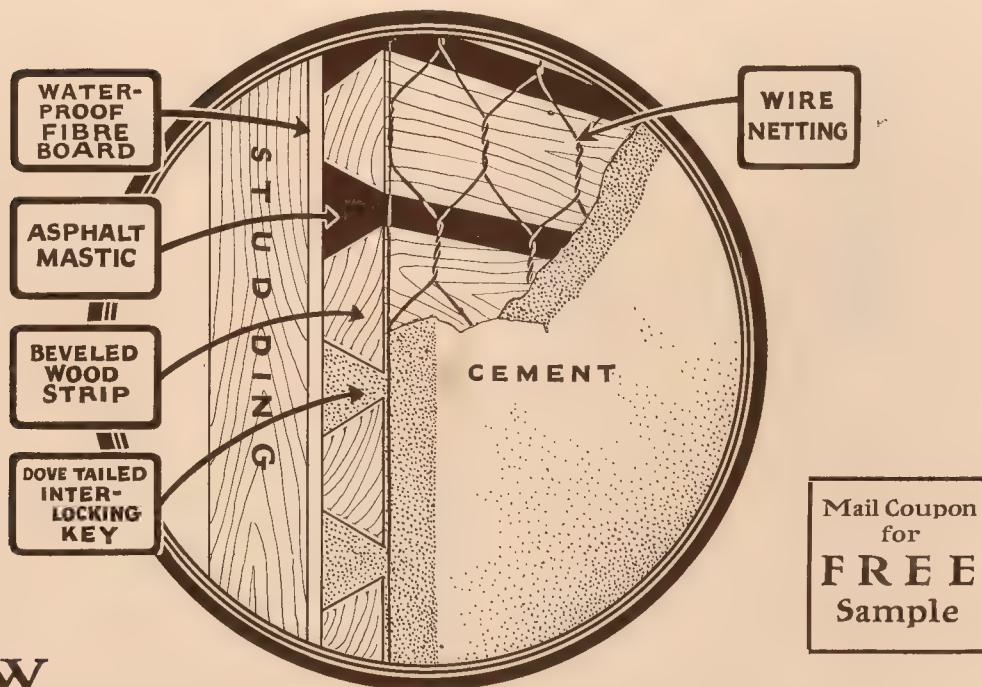
*Ask us for estimates on your  
next construction work.*

### THE MOORE DRY DOCK COMPANY

Address all correspondence to Oakland Office

San Francisco Office: 803 Balfour Building - Telephone Kearny 5248  
Oakland Office and Plant: Foot of Adeline Street - Telephone Lakeside 5180





## Now Bishopric Base is reducing San Francisco's wall building costs 25%

Could you ask for a stronger indorsement of Bishopric Base than the recent amendment to the San Francisco building ordinance which endorses the use of Bishopric Base as a backing for stucco or plaster walls—instead of 1-in. lumber sheathing, as formerly required.

The amendment was made because proof was given that Bishopric-built walls are twice as strong as walls of sheathing. And yet walls built of Bishopric Base cost 25% less!

—and Bishopric Base is the *only* manufactured backing permitted!

This San Francisco victory duplicates the record made in all large eastern cities, where building codes have been similarly amended. For 18 years Bishopric Base has been recognized as the strongest of backings for stucco and plaster.

Are you using Bishopric-built walls in your buildings? We have prepared a complete data file and working sample for your office which will help you in recommending and specifying its use. Just sign the coupon and we'll mail them to you.

BISHOPRIC MFG. CO. of CALIFORNIA  
Los Angeles Offices, 604-626 East 62nd Street, Phone AXridge 9108  
San Francisco Offices, Meyer-Muzzall Co., 60 California Street

# Bishopric Base

SEE

HOW

IT

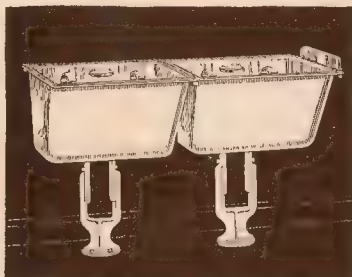
LOCKS

THE

CEMENT

## Mail Coupon NOW for Free Sample





Pacific Porcelain Enameled Iron Laundry Tray G-340

## Would you wash your face in the same tray you wash your clothes?

You could if it was a Pacific Porcelain Enameled Iron Laundry Tray. Its smooth, white surface is easy to keep spotless—just wipe out and rinse.

But you wouldn't wash your face in any unglazed laundry tray. You would see the scum and the absorbed moisture and filth from previous washings. Their foul or musty odors would repel you.

From the standpoint of sanitation and comfort it is as important that the sink your clothes are washed in be as clean as the lavatory in which you wash your face.

Specify Pacific Porcelain Enameled Iron Laundry Trays



Trade Mark Registered

# PACIFIC

## PLUMBING FIXTURES

PACIFIC SANITARY MANUFACTURING CO.  
Main Offices: 67 New Montgomery St., San Francisco  
Factories: Richmond and San Pablo, California  
Branches: Los Angeles, Oakland, Portland, Seattle

## HARMONIZING HOUSE AND GROUNDS

(Continued from page 19)

than lawns, green and velvety, to creep up to the very house itself, to border the walks and drives, to set off pleasingly every detail and feature of both house and garden.

Trees also do much to blend the structure with its site. Those trees of the same country as the house architecture give naturalness and atmosphere to a place. Pines and fir trees of all kinds go with the Colonial house, from the smallest cottage to the most elegant mansion. Plams, magnolia trees, and the banana belong to the southern type of residence while the sycamore and live oak grow in friendly fashion near the rustic or the chalet type of home.

To soften walls, to erase the hard lines of walks or drives, shrubs, flowers and vines are to be used generously. Such shrubs as coprosma or pittosporum may be banked against the house itself. And even geraniums, in a colorful splash, may snuggle the garden closer to the house. Flowers planted along walks or even in beds within the walks, are a means of blending these architectural features as part of the landscaping. Vines climbing over the house bring house and garden together, and vine-covered trellises or arbors extending into the garden are a happy way of introducing the house to the garden.

Color, in the planting scheme, that echoes the house or its trimming is often a means of achieving a pleasing relationship between the house and the grounds. Flowers that catch the hue of rose tinted walls, or that match the yellow trim-of quaint shuttered windows, have a way of making the house and the garden belong to each other. And as this harmony is established between the structure and its setting, the more perfect will be the picture, the more enjoyable the home, both within and without.

\* \* \*

### OFFICIAL LIST, A. I. A.

(Concluded from page 13)

Ehrenpfort, Arthur T., 373 Russ Bldg., San Francisco.  
Ferris, Geo. A., Box 363, Reno, Nev.  
Herold, P. J., 718 Hearst Bldg., San Francisco.  
Joseph, Bernard J., 74 New Montgomery St., San Francisco, Douglas 1996.  
Kleeman, Otto, 562.7 58th St., S. E., Portland, Ore.  
Kraft, Elmer J., Phelan Bldg., San Francisco, Kearny 1517.  
Lenzen, Theodore W., Humboldt Bank Bldg., San Francisco, Douglas 2876.  
McCall, Chas. W., Central Bank Bldg., Oakland, Oakland 2993.  
Newman, William A., Post Office Bldg., San Francisco, Market 301.  
Newsom, Sidney B., Nevada Bank Bldg., San Francisco, Sutter 2815.  
O'Brien, Matt., 68 Post St., San Francisco, Kearny 1482.  
Politeo, Matthew V., 1st Natl. Bank Bldg., San Francisco, Kearny 3954.  
Raiguel, W. O., c/o Tropico Potteries, Inc., Glendale, Calif.  
Schmidt, Herbert A., 45 Kearny St., San Francisco, Kearny 4139.  
Scholz, Arthur G., Phelan Bldg., San Francisco, Douglas 1923.  
Steilberg, Walter T., 1 Orchard Lane, Berkeley, Calif., Berkeley 3440.  
Schroepfer, Albert, Nevada Bank Bldg., San Francisco, Sutter 4657.  
Upton, Louis M., 454 Montgomery St., San Francisco, Kearny 4429.  
Voorhees, Fred D., Central Bank Bldg., Oakland.  
Wythe, Willson J., Central Bank Bldg., Oakland.

### HONORARY ASSOCIATES, AMERICAN INSTITUTE OF ARCHITECTS,

#### SAN FRANCISCO CHAPTER

E. J. Molera, 202 1/2 Sacramento St., San Francisco.  
Maybeck, Bernard R., Lick Bldg., San Francisco, Douglas 1454.  
Schulze, Henry A., 5163 Eagle Rock Blvd., Eagle Rock, Los Angeles.

\* \* \*

### STORY OF THE TRADE SCHOOL

A pamphlet bearing the above title has been gotten out by the Industrial Association of San Francisco, which reviews the progress of these schools since their start early in 1922. It is illustrated and makes an interesting account of a worth-while movement.

\* \* \*

According to J. W. Ford, Jr., houses with walls built of Bishopric Base withstood the earthquake shock in Santa Barbara without exception.



# HOW WELL DO YOU KNOW THE CALIFORNIA PINES?

(Concluded from page 35)

distributing useful information, including folders and booklets for the consumers, an ideal working file for the architect, trade extension and market promotion; advertising intelligently and constructively and, last but by no means least, working wisely for reforestation.

How well do you know the California pines? Whether architect, contractor or home-owner, there is small excuse for lack of familiarity with these great woods of the Sierras, for the Association is ready at all times to give anyone such information as they may desire. It is yours for the asking.

\* \* \*

## OCEAN PARK CONSTRUCTION

(Concluded from Page 37)

construction was placed on steel framing. This system consists of laying gypsum wallboard between the T-rails which form the sub-purlins, then laying a steel reinforcing fabric over the purlins, and pouring a mixture of structural gypsum and wood fibre over the reinforcement, and finally applying a surface of waterproofing material. The under-surface of the wallboard forms the ceiling, which can be decorated as desired. This roof-construction has been used extensively in numerous schools, colleges, theaters and industrial plants throughout the country, especially where it is desired to insulate the roof so as to prevent condensation of water on the ceiling. In this case, the total thickness of the gypsum roof-deck is 2½ inches, and the total surface covered exceeds 30,000 square feet.

Material for wall and roof construction was supplied by the United States Gypsum Company, through its Los Angeles organization, which also contracted for the installation. A total of 11,000 square feet of Sheetrock wallboard and 250 tons of structural gypsum were required for the roof, and 100 tons of Structolite for the walls.

\* \* \*

## NEW OAKLAND SCHOOLS USE CANNON CORRIDOR TILE

THE city of Oakland has adopted corridor tile manufactured by Cannon & Co. of Sacramento for the corridors in 40 odd schools, the first of which are now being constructed under the \$11,000,000 Bond Issue. This corridor tile was originated by Cannon & Co. in 1914 and has a wear-proof and sanitary partition wall which is plastered on the class room side and left exposed on the corridor side.

The advantage of corridor tile over plaster is that in ten year's time the corridor tile walls show no wear or discoloration whatever. They are lined with the same material used in the manufacture of face brick and are just as durable. If the children mark the walls the janitor can easily remove the markings with a bucket of water and a broom. They are made in slightly variegated buff color which absorbs a minimum of light and is said to have a beneficial effect on the deportment and tractability of the students.

Educators consider the development of this interior tile as a worthy contribution to the construction of modern schools.

In the Oakland schools, the corridor tile is carried only to the top of the doors, above which common tile or wood studding is plastered according to design.

Cannon & Co.'s corridor tile has also been used in Sacramento and Stockton schools, as well as for the interior of the new Richardson Springs hotel and for lining the lobby and dining room of this hotel.

These corridor tile are made in 3- and 4-inch thickness for non-bearing walls and 8- and 12-inch thickness for bearing walls. The cost of these tile walls is only slightly greater than walls made of common tile plastered.

# The Skyline of the West!



TRADE MARK REG.

The skyline of the West  
—from Canada to Mexico  
—is yearly growing more imposing.

With this growth has come a greater and greater appreciation of the West's finest building material:

## Raymond Granite

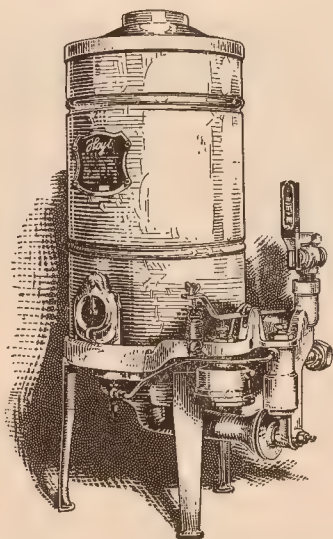
A surprisingly large percentage of "our finest buildings" are built of this wonderful stone.

RAYMOND GRANITE COMPANY  
INCORPORATED

CONTRACTORS

GRANITE • STONE • BUILDING • MEMORIAL

3 POTRERO AVENUE, SAN FRANCISCO  
1350 PALMETTO STREET, LOS ANGELES



## New Model 30 Aluminum Jacket

Embodies important refinements and improvements in our time-tested principle of heating water instantaneously.

## Features

1. Higher efficiency
2. Improved appearance
3. Greater accessibility

*Shown in Sweet's Architectural Catalogue,  
20th Edition*

**Hoyt**  
*Automatic*  
**WATER ~ HEATER**

**HOYT HEATER COMPANY**

2146 E. 25th St.  
Los Angeles

285 O'Farrell St.  
San Francisco

321 Thirteenth St.  
Oakland

121 Broadway  
San Diego

*Show Rooms in the principal cities in California*

## CALIFORNIA STATE CIVIL SERVICE EXAMINATION ARCHITECTURAL DESIGNER BUREAU OF ARCHITECTURE

STATE DEPARTMENT OF PUBLIC WORKS

The California State Civil Service Commission announces that an examination for the position of Architectural Designer, Bureau of Architecture, State Department of Public Works, will be held in San Francisco as soon as practicable. The salary range for this position is from \$2.85 to \$3.50 a month.

### DUTIES AND MINIMUM ENTRANCE QUALIFICATIONS

The duties of this position are under general administrative and technical direction to exercise independent architectural judgment and assume responsibilities in studies and computations necessary for the preparation of designs and estimates; to design and plan important buildings and groups of institutional buildings; and to do other related work.

The examination is open to all American citizens who have reached their twenty-first but not their sixty-first birthday, who are in good physical condition, and who meet the requirements outlined below.

Applicants must have graduated with a degree from an institution of recognized standing with major work in architecture, and must have had not less than five years general architectural experience, of which at least one year shall have been in the direction or performance of important architectural work. They must also possess supervisory or administrative ability or a high degree of technical skill. In the absence of such a degree at least four years of additional general architectural experience will be required. The completion of each full year of such course shall be considered the equivalent of one year of such additional experience.

### EXAMINATION PLAN

The examination will consist of two parts, (a) a non-assembled practical test to be followed by (b) an assembled oral interview. Applicants must secure a rating of at least 70% in the non-assembled practical test in order to be entitled to participate in the assembled oral interview and an average rating of 70% in the oral interview in order to pass the examination and become eligible for appointment.

The non-assembled practical test will consist of a problem in design, to test the applicants' creative ability and practical knowledge of the type of work to be performed as outlined under "Duties". The subject of this practical test will be announced later. The practical test may be carried out at home. The practical test will not carry any weight in the final examination rating but will be considered only as an elimination test.

The oral interview will take place in San Francisco and will be conducted by a special board of examiners appointed by the Civil Service Commission.

### APPLICATIONS

Applications may be secured at the addresses listed below. In addition to the outline of experience set forth on the usual application blank, applicants must submit, with their applications, a supplementary statement, on letter size paper typed on one side only, giving in topical outline form an expansion of the more important phases of their experience. In preparing this supplement, applicants should endeavor to reflect the exact degree of responsibility carried, the magnitude and character of the work for which they were responsible, the organization supervised, including the title and duties of their immediate superior, as well as any important work performed by them.

Persons desiring to enter this examination may secure application blanks from the State Civil Service Commission, Room 331, Forum Building, Sacramento; Room 116,



State Building, San Francisco; Room 1007, Hall of Records, Los Angeles; and from the following offices of the State Free Employment Bureau:

771 Howard Street, San Francisco  
401 Tenth Street, Oakland  
176 South Market Street, San Jose  
916 H Street, Fresno  
35 North Center Street, Stockton  
206 Court Street, Los Angeles  
106 B Street, San Diego

Completed applications must be filed with the State Civil Service Commission, Forum Building, Sacramento.

STATE CIVIL SERVICE COMMISSION.

\* \* \*

#### HEAVY TIMBER MILL CONSTRUCTION

Architectural designers and draftsmen will greatly appreciate a recent important contribution to technical information issued by the National Lumber Manufacturers' Association, Washington, D. C., under the title, "Details of Heavy Timber Mill Construction." This bulletin illustrates good practice in heavy timber mill construction detailing and furnishes a distinct service not elsewhere available in compact and simple form. It will be mailed free upon request.

From the preface of the bulletin it is indicated that heavy timber detailing has become a specialty. Those who specialize in mill construction have sets of details designed especially to meet their needs. Those who only occasionally are called upon to design buildings of this class usually improvise details as the need develops. This bulletin is intended primarily for this latter class, though its use by specialists as well would help standardize procedure. Its use in the drafting room should save the time of draftsmen and designers and help toward a more widespread knowledge of good practice in timber detailing. Proper detailing is the essential feature of most types of construction. The general design may be sound in every respect but unless the connections are properly proportioned and secured, lack of stability and sometimes actual failure occur.

These details are based upon a careful field examination of recently erected buildings built in conformance with well established design principles.

\* \* \*

In the Los Angeles metropolitan area, fifteen municipalities report a June total of building permits of \$19,772,882, which is 41% above June a year ago.

\* \* \*

Seven Western cities are among the twenty-five leading cities in the United States, reporting largest volume of building permits in the first half of 1925. Only four cities in the United States exceeded Los Angeles and only nine exceeded San Francisco in permits issued during that period.

\* \* \*

#### BOHAN COMPANY PICNIC

E. R. Bohan & Company, paint and varnish manufacturers, maintaining four stores in Los Angeles, treated 250 employees and their families to a picnic last month at El-Merric-Del, Kagel Canyon. It was a huge success.

**"FYER-WALL"**  
ALL METAL FIRE DOORS

*High Grade Sheet Metal and Kalamein Work*

FIRE PROTECTION PRODUCTS CO.  
3117 TWENTIETH STREET, SAN FRANCISCO



## Time to Design the LIGHTING



THE lighting system is vitally important and should be designed before wiring is done. Now, while the plans are before you, call in a representative of this company. If you want unusual and beautiful lighting effects this is the thing to do.

Estimates and special designs cheerfully furnished. Fixtures made according to specifications. Telephone or write for our de luxe booklet, "The Fine Art of Lighting."

**FORUE-PETTEBONE CO.**

*Lighting Equipment*  
818 South Figueroa Street

LOS ANGELES

# BEAR BRAND

Tub Filler and Shower



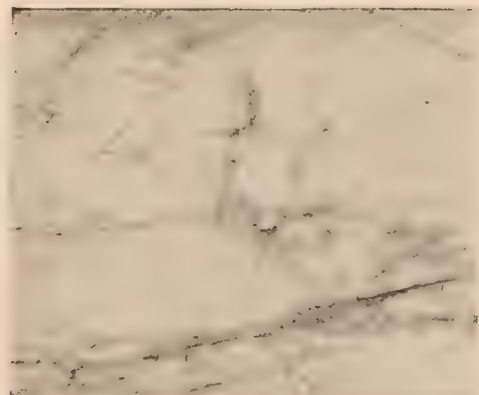
## "The California"

FIG. 27

This fixture is a completely assembled and tested unit—ready for installation.

The "Shasta" All-China Spout (Fig. 33) may be used on this combination if desired.

STANDARD BRASS CASTING COMPANY  
Manufacturers of High Grade Plumbing Brass Goods  
OAKLAND, CALIFORNIA



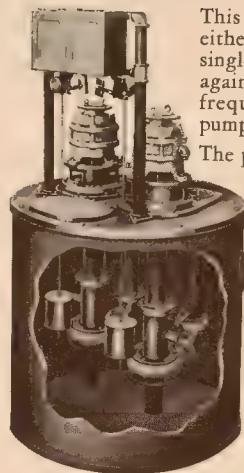
## MARBLE

—and its correct treatment and installation are matters requiring expert craftsmen. Our splendid organization is always at the service of the architect and the builder.

### JOSEPH MUSTO SONS-KEENAN COMPANY

535 North Point, San Francisco  
1064 S. Broadway, Los Angeles 1430 Webster St., Oakland

## The Byron Jackson Improved Sewage Pump



This sewage ejector, built for either wet or dry pit service, single and duplex, is proof against the many troubles so frequently associated with pumps used for such service.

The pump is so designed that no sewage comes in contact with either the shaft or the bearings. It is proof against misalignment. Perfect lubrication assures long life.

And back of the pump is Byron Jackson service and an experience in pump design and production that extends over half a century.

BYRON JACKSON PUMP MFG. CO., INC.  
Factory and Main Office, Berkeley, California

Branches:  
San Francisco, Los Angeles, Visalia, Salt Lake City, Portland, Ore.



# PLUMBING MANUFACTURERS CONSOLIDATE

AS A result of the consolidation of two large Western plumbing fixture manufacturers, the Washington Iron Works of Los Angeles can now supply the largest and most complete line of plumbing fixtures made in the West, it is reported from the general offices.

The products of the big seven-acre factory of the West Coast Porcelain Manufacturers, of Millbrae, California, manufacturing vitreous china fixtures, will now be marketed in Southern California under the brand name of the Washington Iron Works of Los Angeles, pioneer Pacific Coast manufacturers of porcelain enameled fixtures.

According to G. B. Schneider, General Manager of the Washington Iron Works, the union of the two companies products will form the most complete line of plumbing fixtures made on the Pacific Coast. The line of vitreous china ware made by the West Coast Porcelain Manufacturers, includes toilets, lavatories, urinals, etc., while the Los Angeles plant produces porcelain enameled bath tubs, lavatories, urinals, sinks, and laundry trays.

"The first and most important effect of the consolidation is the extension of the Washington Guarantee to include vitreous china fixtures," Mr. Schneider said. "Effective immediately we give the same guarantee on vitreous china fixtures as we do on porcelain enameled fixtures. In brief, this guarantee, signed by both the Washington Iron Works and the plumbing merchant, agrees to replace, free of charge, any Washington fixture which develops any defect after installation. Every important fixture in the bath room, kitchen and laundry is now fully protected by this guarantee.

"Those who know about the defective, non-guaranteed plumbing fixtures which have flooded Southern California will welcome this guarantee as the most important step which has yet been taken to protect home builders. Plumbing merchants throughout Southern California are able to supply these guaranteed fixtures immediately," Mr. Schneider explained.

"The vitreous china fixtures of the West Coast Porcelain Manufacturers have won praise throughout the West for their fine quality and they have been installed in thousands of homes and buildings on the Pacific Coast.

The capacity of the two plants is more than 1,700 fixtures daily, it is announced, and over 750 men are employed. The two factories, which cover 10¼ acres, consume over 200,000 pounds of raw materials daily. In volume and value of output these consolidated plants form one of the leading manufacturing organizations on the Pacific Coast.

\* \* \*

## CONSTRUCTION LESSONS FROM SANTA BARBARA

(Continued from page 5)

Bearing walls and other walls of unit masonry construction shall be tied together at the level of each floor line from outside to outside of the structure, by continuous iron rods or by other bonds of equivalent value, and shall also be tied to all vertical partition walls wherever possible.

Veneer finish, cornices, and ornamental details shall in every case be bonded into the structure so as to form an integral part of it. This applies to the interior as well as the exterior of the building.

Bracing. Bracing for lateral forces shall be calculated to resist the stresses set up in each bent by the acceleration or equivalent lateral pressure, taking account of the moments of inertia or the area, as the case might be, of the entire structure above the bottom chord of the bent.

\* \* \*

San Francisco, reporting a June building permit total of \$4,661,024, shows a 14% gain over the May record, a 19% gain over June of last year, and increases of 10% and 39%, respectively, over the figures for June, 1923, and June of 1922.

\* \* \*

Portland's June record of \$4,772,020 in building permits established a new high record for that city. It shows an increase of 103% over June, 1924.

# STRABLE

## HARDWOOD COMPANY

Triple S Sheath

**THE NEW  
and  
BETTER  
BUILDING  
PAPER**

**IT IS  
absolutely  
WATER  
PROOF**

# STRABLE

## HARDWOOD COMPANY

G. H. BROWN, PRESIDENT  
OAKLAND, CALIFORNIA



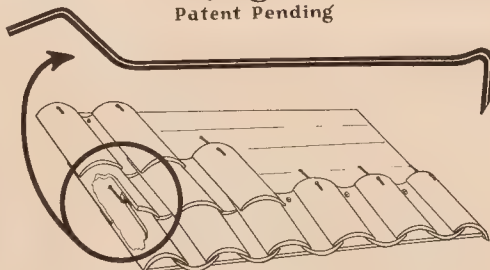
Haws Model No. 3A

There is a Haws model for every architectural purpose.

**HAWS SANITARY  
DRINKING FAUCET  
COMPANY** 1808 HARMON ST.  
BERKELEY, CAL. U.S.A.

## Sullivan Roofing Tile Fastener

Patent Pending



Sullivan Roofing Tile Fasteners make a better job. They eliminate the 2x3 wood strips, saving time, labor, and material. Eliminating the wooden strips prevents broken tile caused by nailing.

These time-, money-, and tile-saving fasteners are made of No. 11 galvanized wire, packed 1000 in a carton, and weigh 23½ pounds per 1000 packed. *Price on application.*

**PLANETT  
MANUFACTURING CO.**  
Second and Grove Sts. / Oakland, California



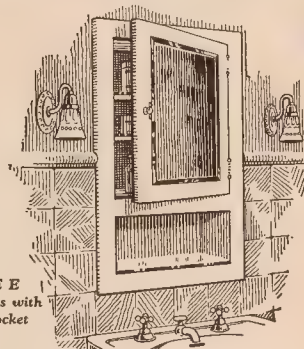
Liberty Bank Building, San Francisco. H. A. Minton, Architect  
Ornamental Iron Entrance and Bronze Teller Cages  
Show True Craftsmanship.

**FEDERAL ORNAMENTAL IRON &  
BRONZE COMPANY**

SIXTEENTH STREET AND SAN BRUNO AVE. - SAN FRANCISCO, CALIF.  
TELEPHONE MARKET 1011

## HESS CABINETS and MIRRORS

Snow-White Steel



STYLE E  
to recess with  
open pocket  
below.

**H**ESS Cabinets and Mirrors are built to the highest standard of workmanship and finish.

While cheaper goods are made there is nothing equal to ours, at the prices we ask. Seekers for good cabinets are invited to ask us to demonstrate this, by submitting samples for comparison.

See Sweet's Index; or write for illustrated booklet.

**HESS WARMING & VENTILATING CO.**  
Makers of Hess Welded Steel Furnaces.  
1218 S. Western Avenue, Chicago



# You give him Individual Light- Why not Individual Heat?



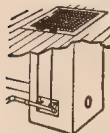
**In the Pacific Line**  
are types for all purposes—schools,  
churches, stores, homes, office  
buildings, factories:



**Pressed Metal and  
Cast Iron Radiators**  
Pressed Metal Radiators are the  
least expensive—and often the  
best—type of gas heating. Pacific  
radiators—pressed metal and  
cast iron—are of Toncan resis-  
ting metal. Exclusive air circula-  
tion system reduces gas bills 25%.

## Warm Air Furnaces

Concealed below the  
home, these units are  
operated by upstairs con-  
trol. Maintain even tem-  
perature automatically.  
The ideal heating system  
for Western homes.

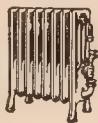


## Floor Furnaces

From two to five rooms may  
be heated with warm fresh  
air by a Pacific Floor Fur-  
nace. Cold air is drawn from  
the floor, reheated and cir-  
culated without loss of oxygen.  
Economical gas consumption.

## Gas-Steam Radiators

Individual steam heat—with-  
out a costly central plant.  
Automatically regulated. The  
most efficient system for large  
buildings or installations  
where even steam heat is re-  
quired.



## Radiant Heaters

Pacific and other makes.  
Inexpensive installation.

**W**HEN No. 514 comes down to his office  
to work at night nobody would think  
of turning on all the lights in the building just  
so No. 514 could see.

Is it any more logical to turn on all the heat in  
the building merely to keep No. 514 warm?

In hundreds of office buildings, tenants are sup-  
plied with individual heat by Pacific Gas-Steam  
Radiators. Leading architects indorse this system  
—especially for Western office buildings.

Call in a Pacific Heating Engineer. From his ex-  
perience with thousands of installations he may  
make valuable suggestions. His service is FREE.

Telephone BEacon 2190.

# Pacific Gas Radiator

**Gas Heating Company Headquarters**

1740 W. Washington St., BEacon 2190; 616 W. 8th St., METropolitan 2398  
Factory and Foundry, 7541 Roseberry St., Los Angeles. Branches in principal Cities of Coast.





*The Ojai Valley Country Club. Mr. Wallace Neff, Pasadena, Architect. Frank Carpenter, Beverly Hills, California, Contractor.  
Medusa White Cement was used in exterior stucco, the finish coat for which was manufactured by the California Stucco Products Company of Los Angeles.*

# *It is White!*

## *Leading Applications for Medusa White Cement:—*

Artificial Stone  
Cement Plaster  
Cast Stone  
Concrete Block Facing  
Cement Brick  
Cement Mantels  
Floor Tile  
Lawn Furniture  
Mortar  
Ornamental Cement Work  
Lamp Standards  
Stucco  
Swimming Pools  
Shower Baths  
Traffic Markers  
Terrazzo Tile  
Table Tops and Counters  
—and many more

**YOU** can find full expression for your art in beautiful structures covered for permanence and enduring beauty, with Medusa White Portland Cement Stucco.

And you can carry your plans to consistent conclusion through using Medusa White Cement at other points of construction. This partial list will assist you in determining just what these uses can, and should, be.

New Medusa literature, in standard architectural sizes, describing many of the uses for Medusa White Cement will be gladly sent at your request. Detailed Specifications appear in "Sweet's," pages 116-117 and 420-422.

## **THE SANDUSKY CEMENT COMPANY, CLEVELAND, OHIO**

Medusa Non-staining White Portland Cement—Plain and Waterproofed—Medusa Waterproofing and Medusa Cement Paint in Six Colors, are carried in stock and sold by leading building-supply dealers in California, Oregon and Washington.

# **MEDUSA WHITE CEMENT**





FEATURING • BRANCH BANKS OF ITALY

# PACIFIC·COAST ARCHITECT

WITH WHICH IS INCORPORATED THE BUILDING REVIEW



VOLUME XXVIII • OCTOBER · 1925 • NUMBER · FOUR  
PRICE 50 CENTS

Hemmings & Starks  
*Architects and Engineers*



Lindgren & Swinerton,  
Inc.  
*Builders*

## New Elks Building at Sacramento

*Now Being Built of Cannon's Face Brick*

Of the Georgian Type Colonial Architecture finished in Cannon's Italian Orange Pink Face Brick with black recessed mortar joints, Knoxville fast colors, this splendid new 14-story home of the Sacramento Lodge of Elks will undoubtedly be equal to any lodge building in the country.

It is a work of real pride for Cannon & Co. to be associated with the architects and builders in its construction.

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# PACIFIC COAST ARCHITECT

WITH WHICH IS INCORPORATED THE BUILDING REVIEW

VOLUME XXVIII

SAN FRANCISCO AND  
LOS ANGELES, OCTOBER, 1925

NUMBER FOUR

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# PACIFIC · COAST · ARCHITECT

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VOLUME XXVIII · SAN FRANCISCO AND LOS ANGELES · OCTOBER, 1925 · NUMBER FOUR

## BRANCH BANK BUILDINGS

BY HARRIS ALLEN, A. I. A.

**T**HE Branch Banks illustrated in this issue have been chosen more or less at random from forty odd such buildings, erected by one Bank and designed by one architect.

This is quite a remarkable record. What makes it even more notable, is the generally high character of architectural design and construction, the excellent quality of material and workmanship. No accident, this; but obviously a definite

policy, consistently carried out, even as other policies which have shared in building up the Bank to its present extraordinary prestige.

It is interesting to observe, in this connection, the care taken in every plan, no matter how differently shaped the lots, to keep close the contact between officers of the bank and customers, the comfortable circulation provided for public use, the easy access to safe deposit vaults.

The architectural treatment, quite logically, consists of Italian Renaissance Motifs used in a dignified manner, without excess of ornament and equally without dullness or stereotyped repetition. Details are well designed—crisp and “lively”—and well executed. Color is used sparingly and successfully. With few exceptions, a lofty, graceful arch is used for fenestration, with delicately wrought metal frames and grilles. Such buildings are creditable to any neighborhood, and the Bank of Italy and Mr. Minton are both to be congratulated upon the results of their professional relationship.

\* \* \*

## HOME-BUILDING INCREASES

COMMENTING on building and home ownership activities, President E. G. Grace, of Bethlehem Steel Corporation, says:

“Building and construction activities in this country absorb nearly one ton in every five of the production of iron and steel, being exceeded in steel consumption only by the railroad industry. Building operations interest us not only because they thus provide an important part of the steel market and affect the steadiness of our operations, but also because of their connection with the desire each of us has to own a home.

“Since the World War building operations throughout the country have increased from three and one-half billions of dollars in 1919 to over five billions in 1924. Delayed building has been credited for much of this activity, but it is possible that new factors have now entered the building industry which are just as important as delayed building held over from the war.

“Increased buying power during the past ten years, has made it possible for people in this country to realize to an increasing extent the desire to own their homes. Home building has accounted for nearly one-half of building operations during the past year. It is not only a question of housing, but of more and better housing. A demand has grown for additional space, for modern conveniences, for room for gardens and space for children to play in safety.



LIBERTY BANK, MISSION STREET, SAN FRANCISCO  
H. A. MINTON, ARCHITECT



ARCHITECT'S DRAWINGS, COLLEGE AVENUE BRANCH, BANK OF ITALY, BERKELEY, CALIFORNIA.  
H. A. MINTON, ARCHITECT





COLLEGE AVENUE BRANCH, BANK OF ITALY, BERKELEY, CALIFORNIA. H. A. MINTON, ARCHITECT



BUILDERS OF INDUSTRIAL PLANTS SUCH AS THE ONE PICTURED HERE ARE REALIZING MORE AND MORE, THE IMPORTANT PART PAINTING PLAYS IN PLANT EFFICIENCY. QUALITY PAINTING AT MODERATE COST WAS ESSENTIAL IN THIS SAN FRANCISCO PLANT OF THE OTIS ELEVATOR COMPANY / P. J. WALKER CO., BUILDERS / A. QUANDT & SONS, PAINTERS AND DECORATORS. ALL INTERIOR CONCRETE SURFACES FINISHED WITH "BARRELED SUNLIGHT," GRANOLITH AND ENAMEL.

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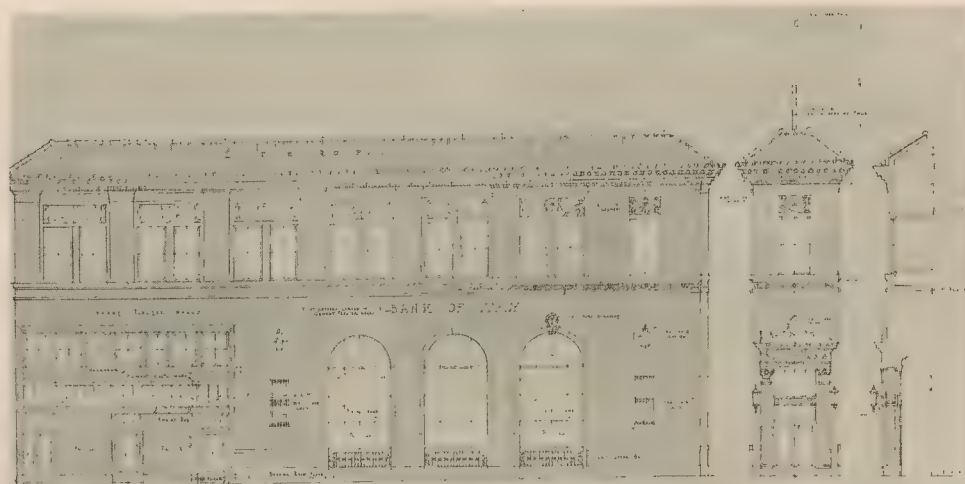
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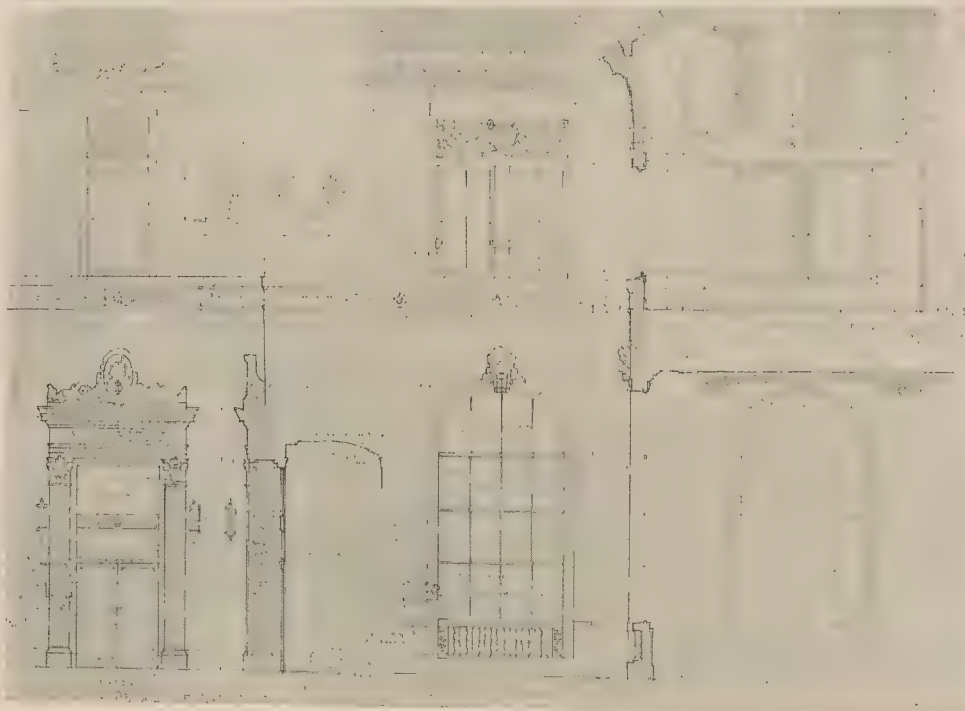


ENTRANCE DETAIL, COLLEGE AVENUE BRANCH, BANK OF ITALY, BERKELEY, CALIFORNIA.  
H. A. MINTON, ARCHITECT



COLLEGE AVENUE BRANCH, BANK OF ITALY

BERKELEY, CALIF.



ARCHITECT'S DRAWINGS, COLLEGE AVENUE BRANCH, BANK OF ITALY, BERKELEY, CALIFORNIA.  
H. A. MINTON, ARCHITECT





INTERIORS, COLLEGE AVENUE BRANCH, BANK OF ITALY, BERKELEY, CALIFORNIA. H. A. MINTON, ARCHITECT



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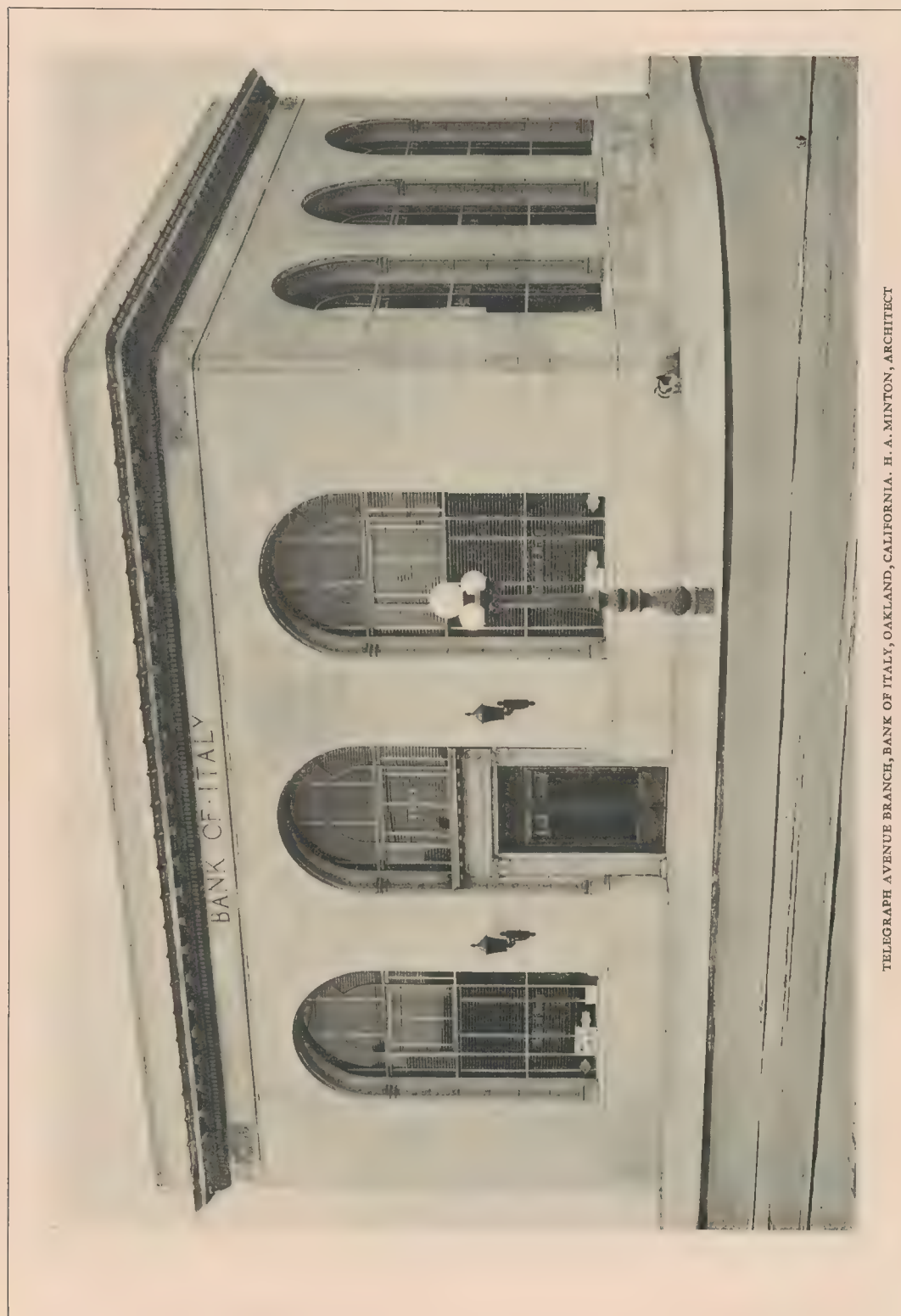
Southern California Chapter, American Institute of Architects, in recognition of "Merit in Design and Execution of Work," awarded the Certificate of Honor to our Tropico Potteries for the terra cotta of the Bank of Italy Building, Los Angeles.

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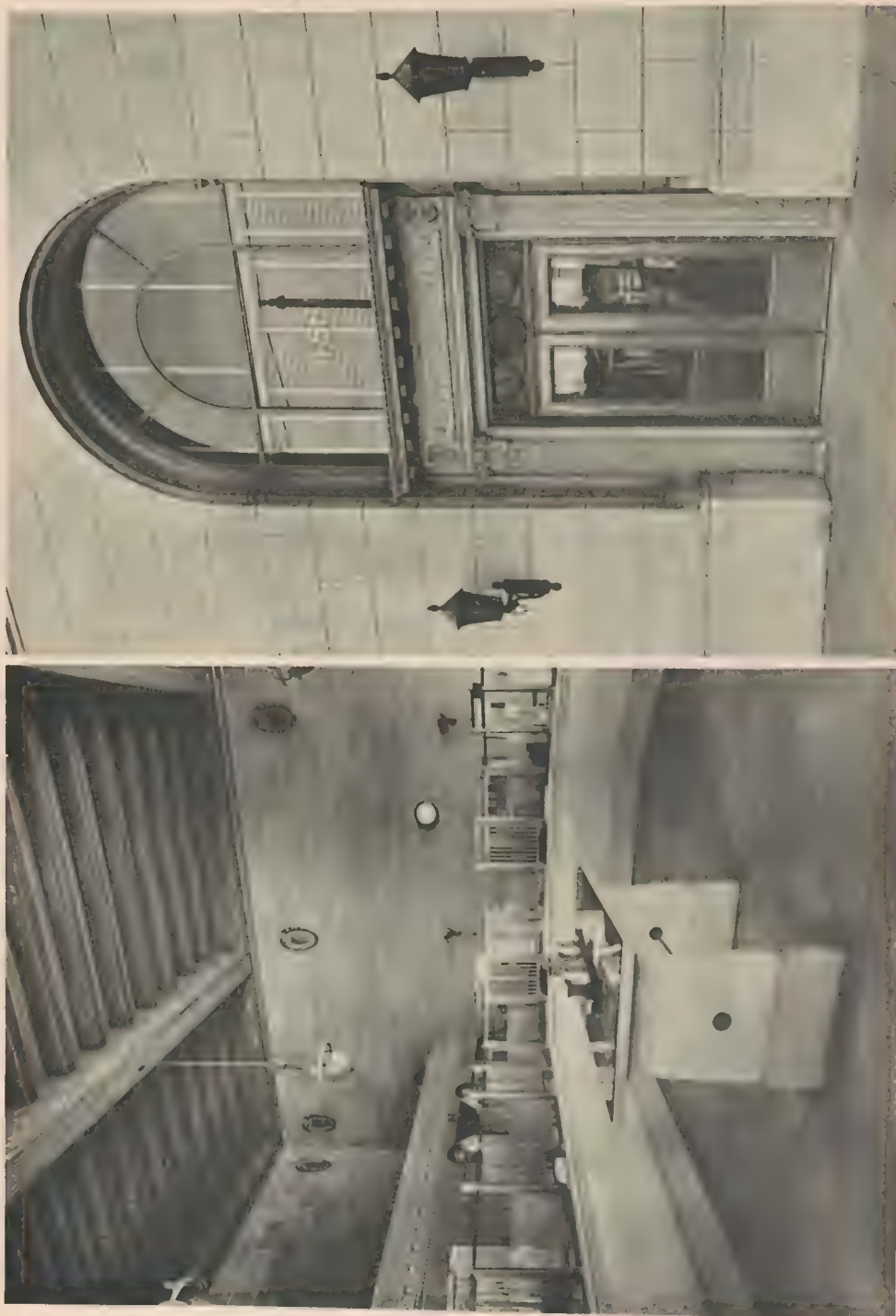
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TELEGRAPH AVENUE BRANCH, BANK OF ITALY, OAKLAND, CALIFORNIA. H. A. MINTON, ARCHITECT



TELEGRAPH AVENUE BRANCH, BANK OF ITALY, OAKLAND, CALIFORNIA H. A. MUNION, ARCHITECT





RIDEOUT BRANCH, BANK OF ITALY, MARYSVILLE, CALIFORNIA. H. A. MINTON, ARCHITECT



*A close up of the frieze of architectural terra cotta which lends a touch of real distinction to the structure . . . one of the most pleasing in the west. The figures (in color) stand out in bas relief.*

ALL terra cotta used in the walls of this handsome Seventh Street home of Young's Market in Los

Angeles was produced by this company. It presents another example of the diversified service Los Angeles Pressed Brick Company lends to builders—the most complete of any institution of its kind in the West.

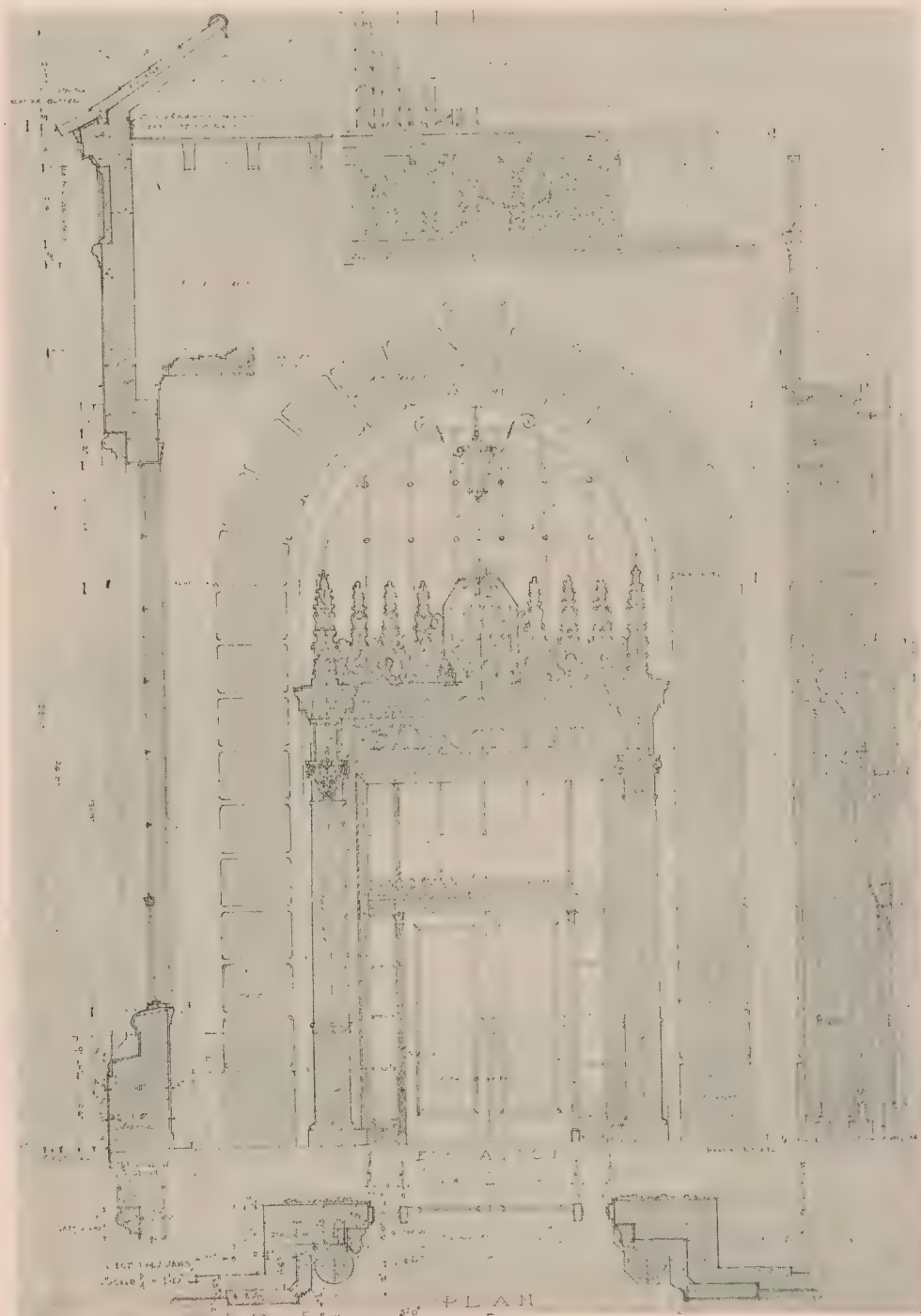
This company was established in 1887. During these many years it has built a reputation for quality—and this reputation it intends to maintain.

Chas. F. Plummer  
Architect.

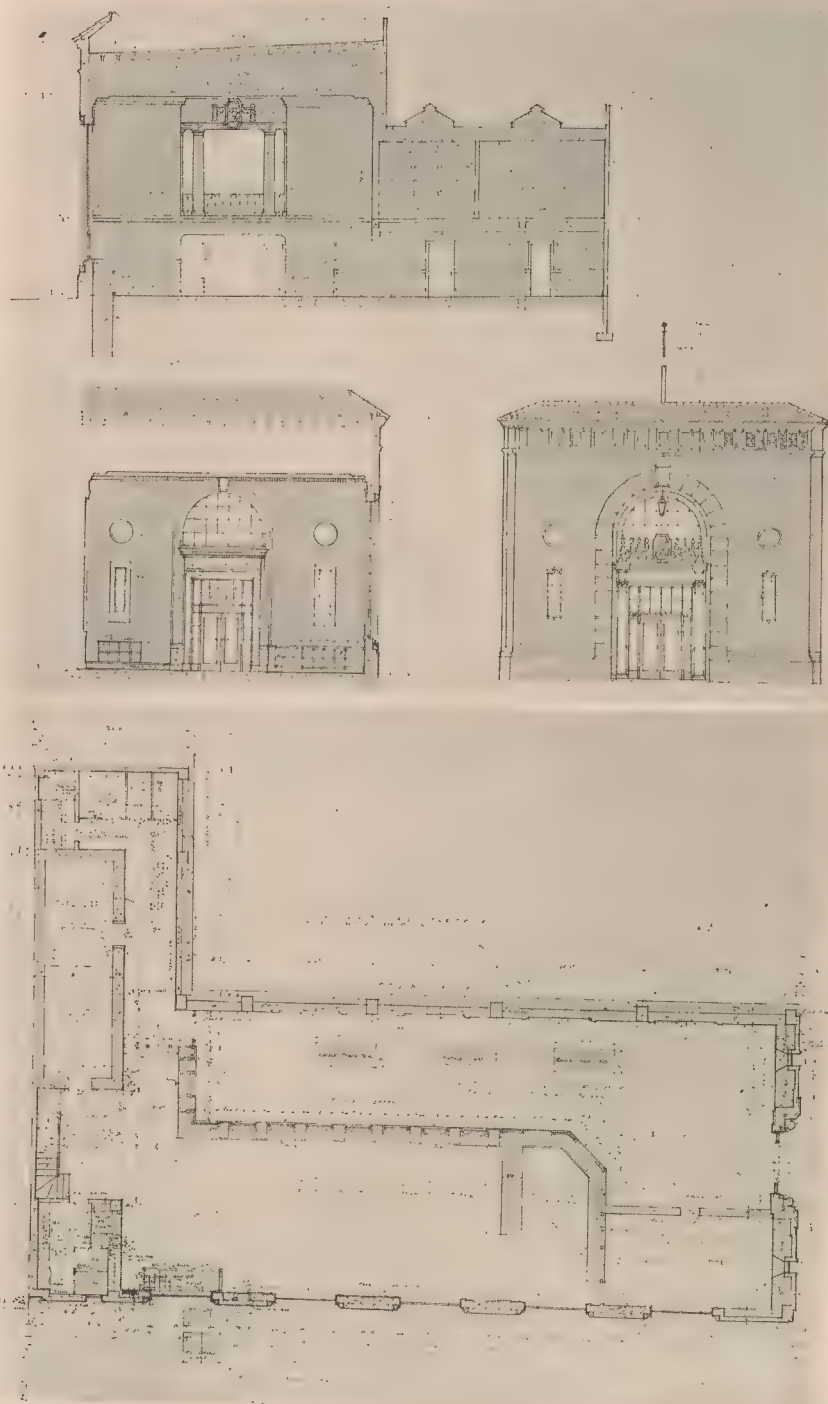
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DETAIL DRAWINGS, RIDEOUT BRANCH, BANK OF ITALY, MARYSVILLE, CALIFORNIA; VENTURA BRANCH  
BANK OF ITALY, VENTURA, CALIFORNIA. H. A. MINTON, ARCHITECT

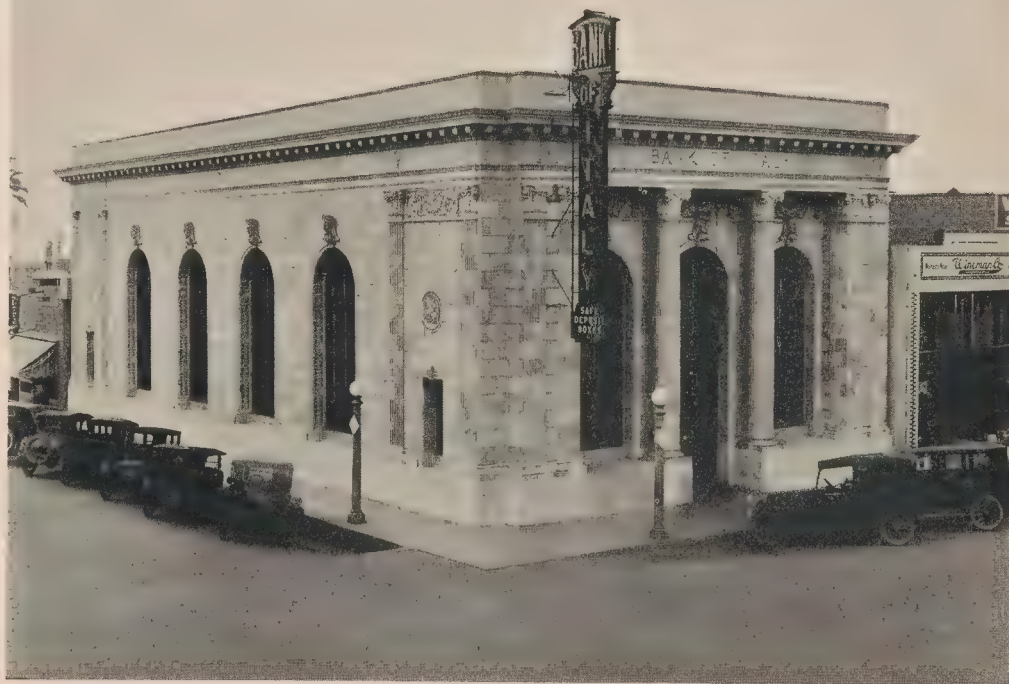




ABOVE—ARCHITECTS' DRAWINGS—RIDEOUT BRANCH, BANK OF ITALY, MARYSVILLE, CALIFORNIA

BELOW—VENTURA BRANCH—BANK OF ITALY, VENTURA, CALIFORNIA

H. A. MINTON, ARCHITECT



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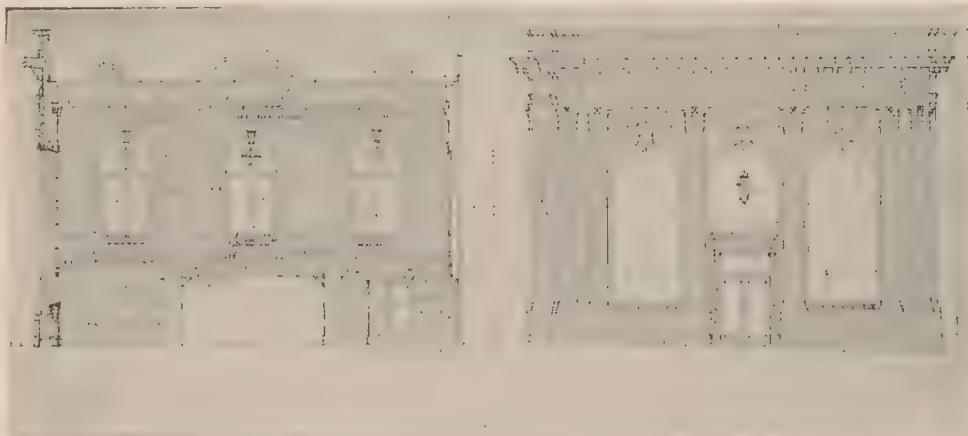
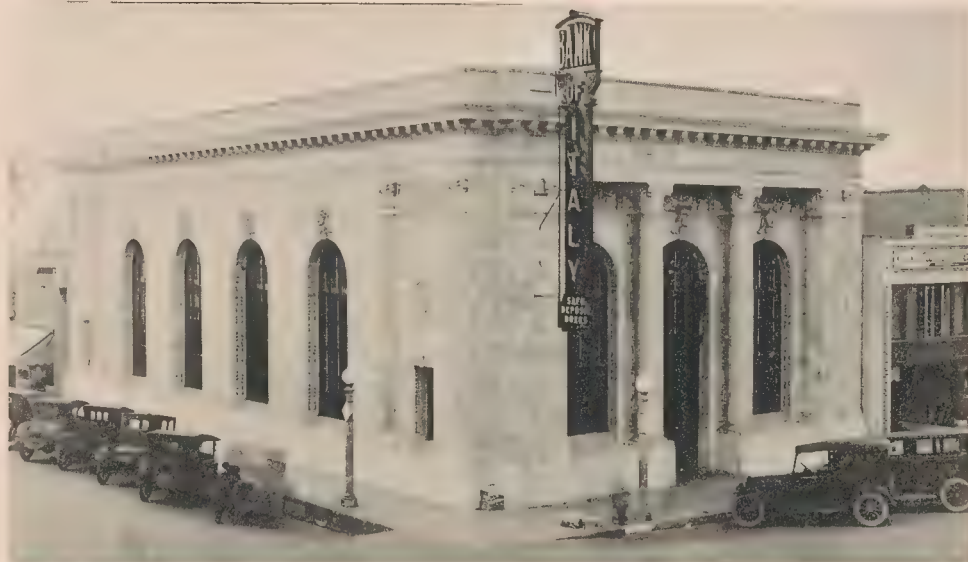
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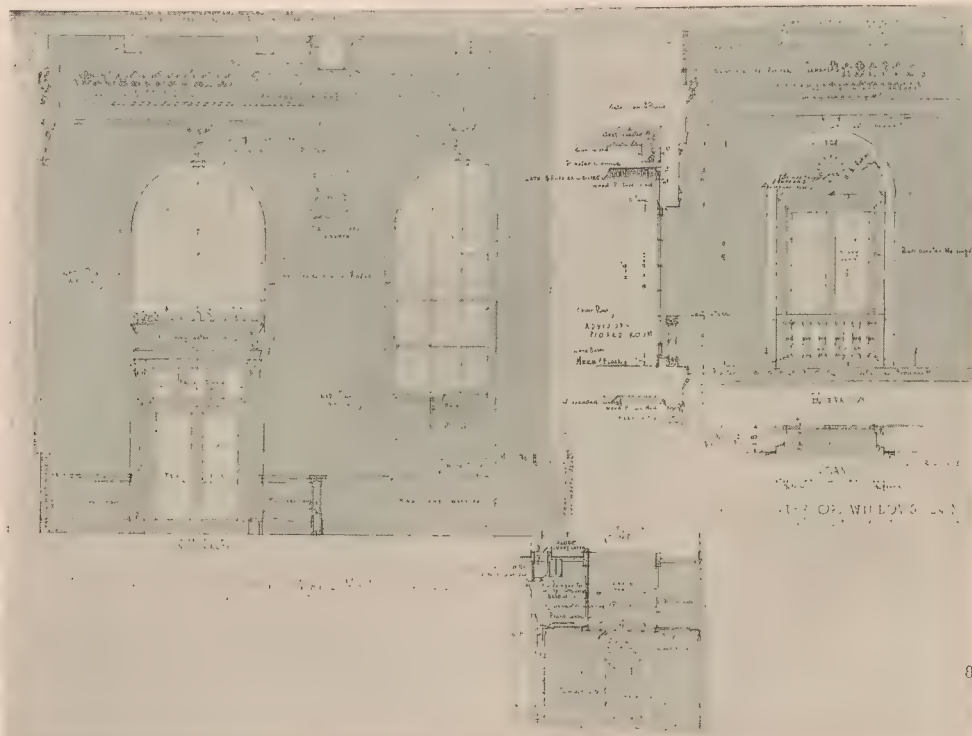
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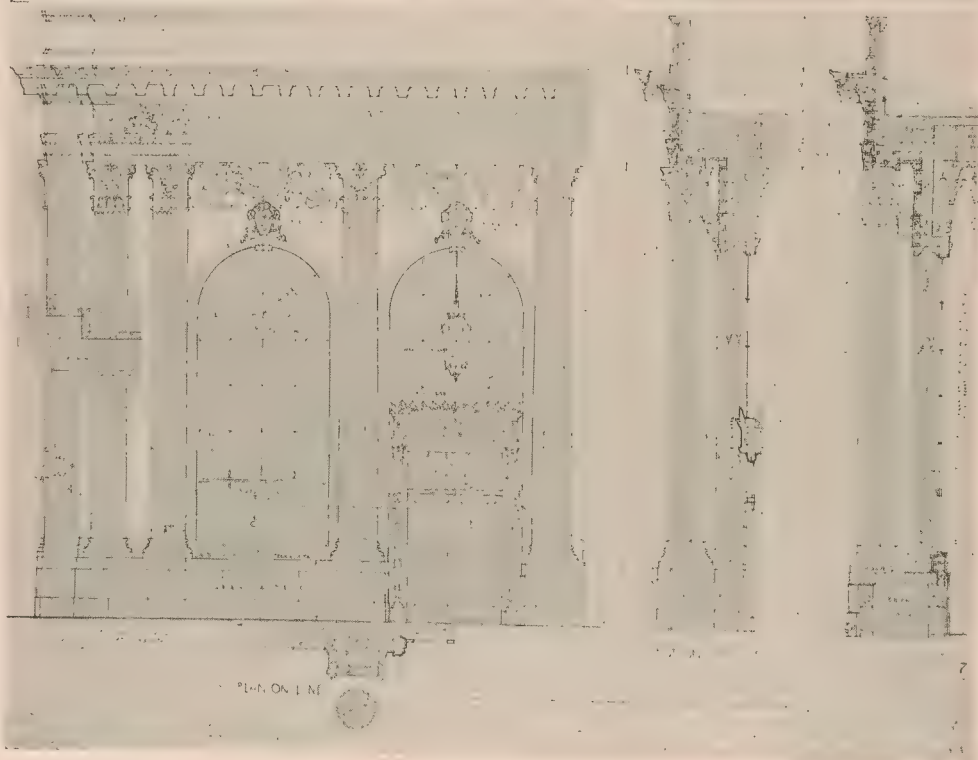




ABOVE—EXTERIOR; BELOW—ARCHITECTS' DRAWINGS, VENTURA BRANCH, BANK OF ITALY, VENTURA, CALIFORNIA.  
H. A. MINTON, ARCHITECT



8



7





ARCHITECT'S DRAWINGS, HANFORD BRANCH, BANK OF ITALY, HANFORD, CALIFORNIA; CENTERVILLE BRANCH, BANK OF ITALY, CENTERVILLE, CALIFORNIA. H. A. MINTON, ARCHITECT



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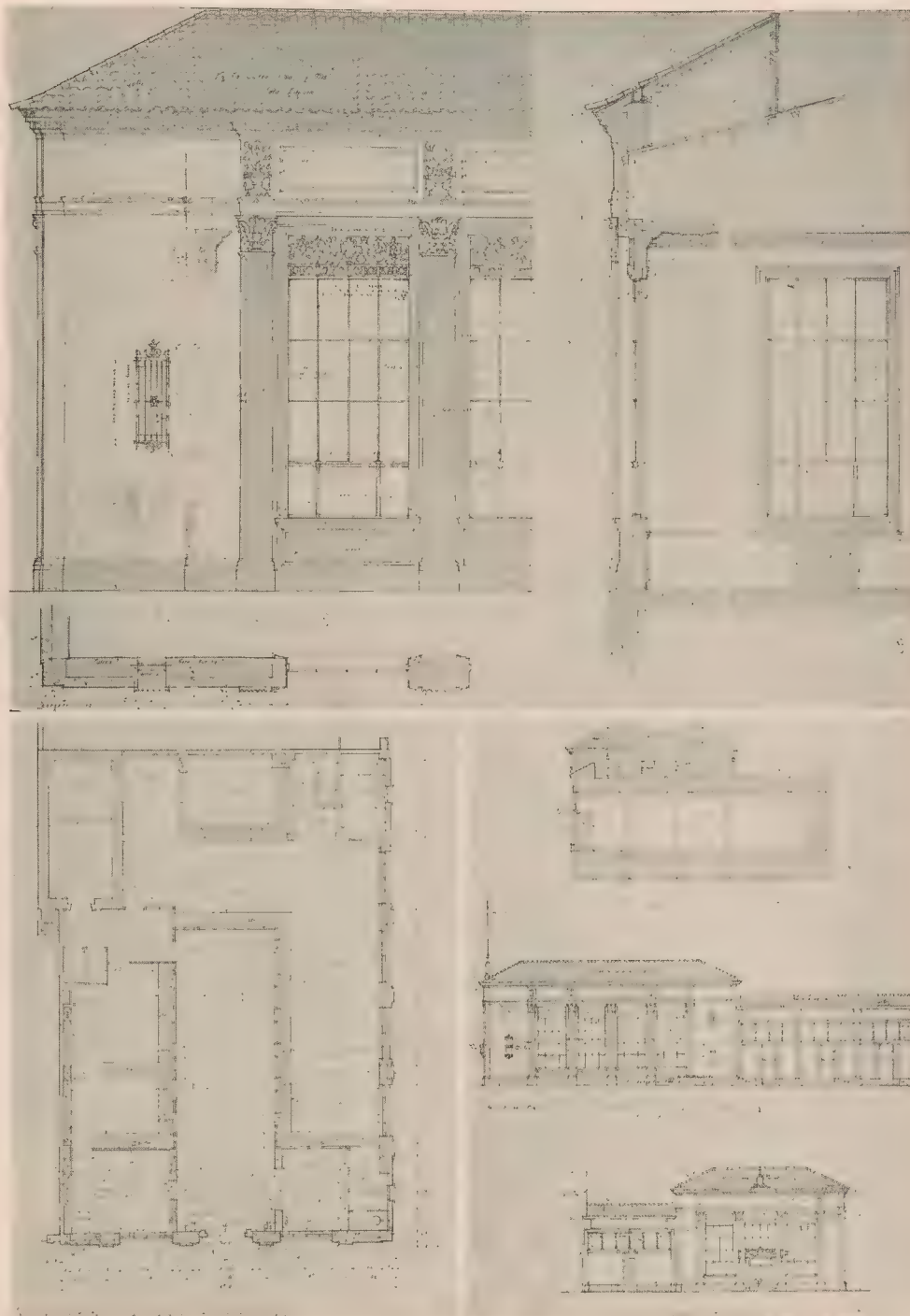
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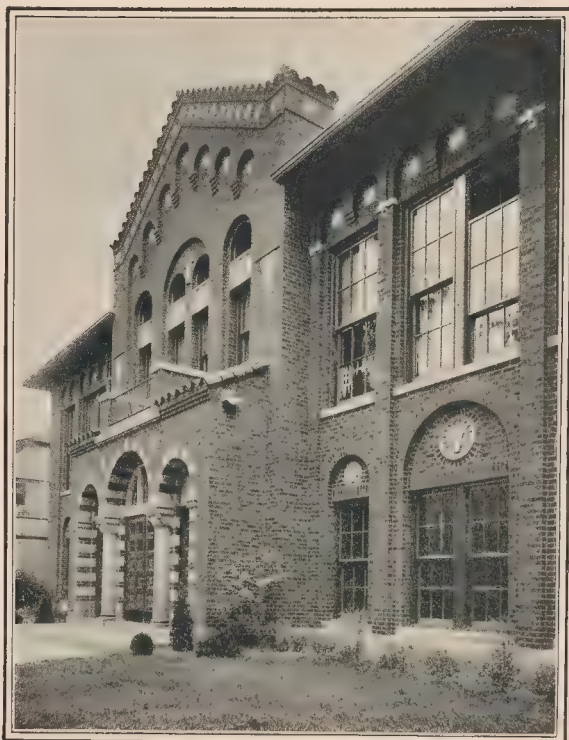
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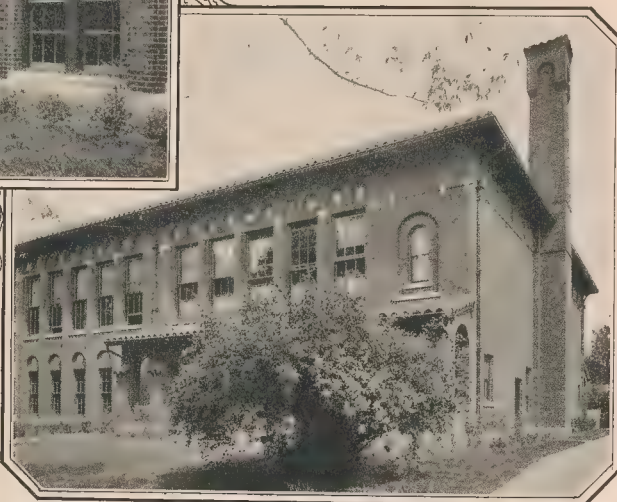


ARCHITECT'S DRAWINGS, HANFORD BRANCH, BANK OF ITALY, HANFORD, CALIFORNIA.  
H. A. MINTON, ARCHITECT



A **S**PLENDID example of brick treatment that carries out the spirit of the material. Note the grace of the piers with their stone caps, the beautiful frieze, lightened with spots of stone trim, the pendant arches, resting on the corbels, and the chimney with its ornamental cap. The soft texture of the wall imparted by the mat brick and natural flush cut mortar joint, which is one of the most charming features of this building, is lost in the small illustrations.

*Two Views  
of St. Paul's School,  
Park Ridge, Illinois.  
James Burns, Architect*



**A**RCHITECTS in all parts of the country are designing beautiful face brick buildings. More than a hundred illustrations of their work have been assembled in "Architectural Details in Brickwork." These half-tone plates suggest the wide range of effects that can be economically produced by standard size face brick. The portfolio, published

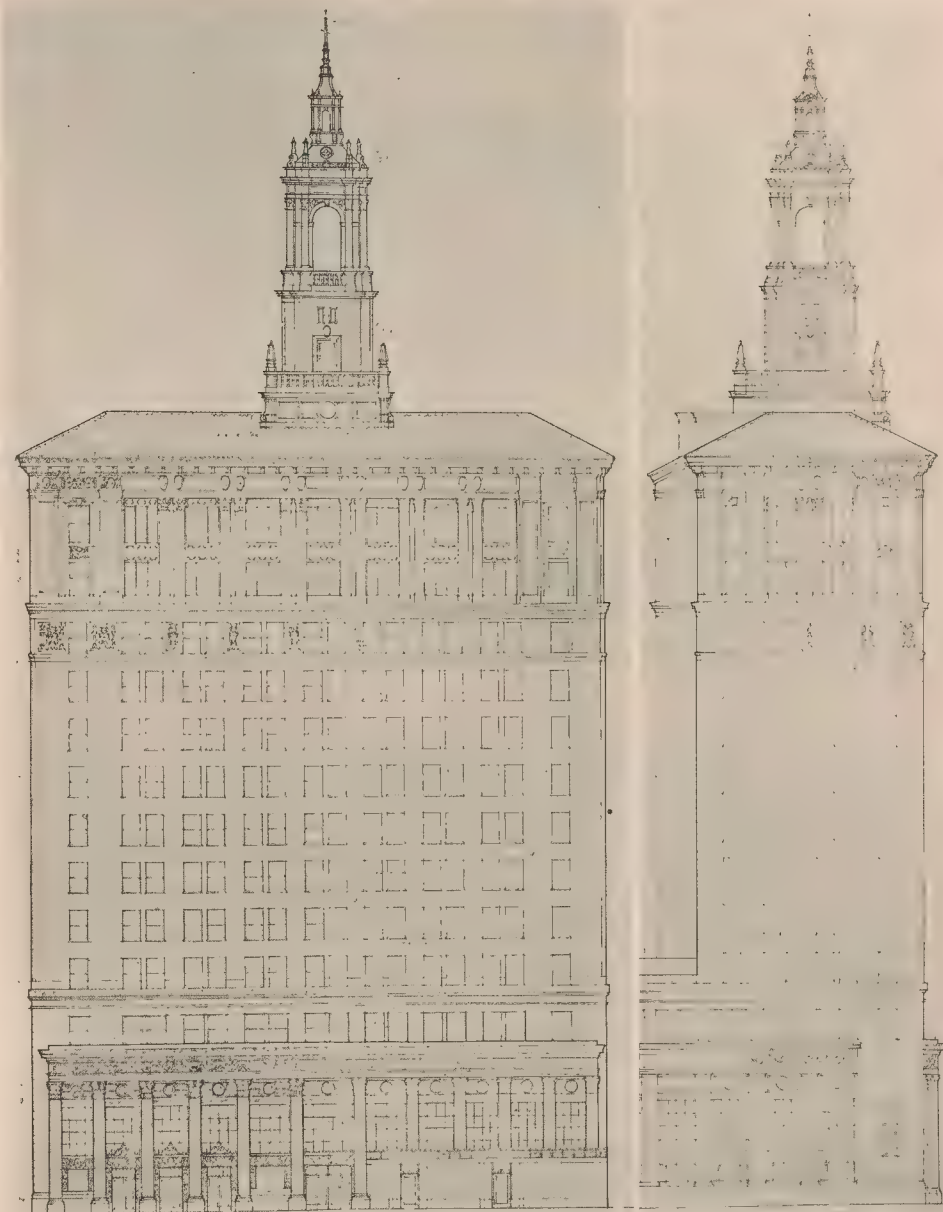
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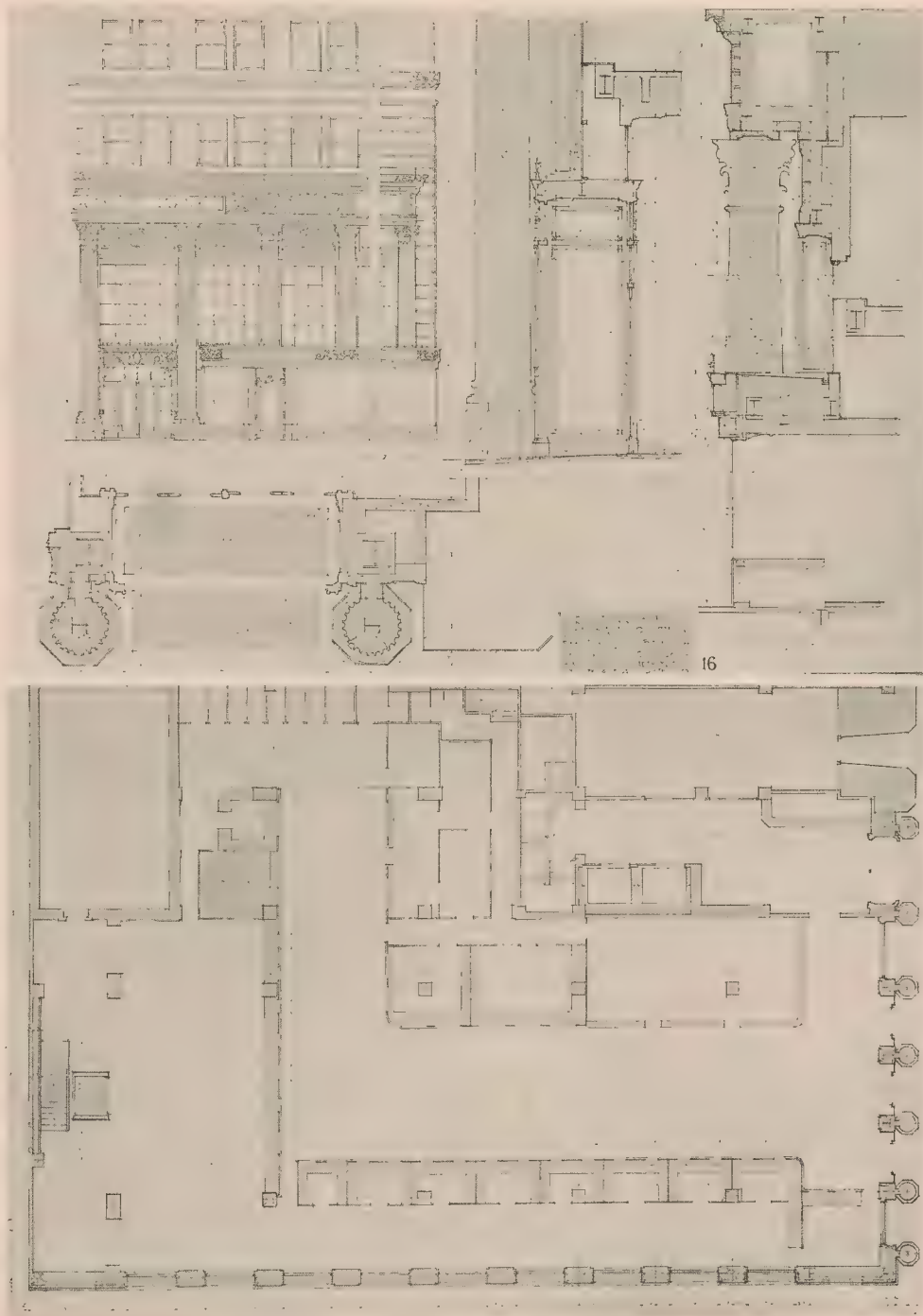
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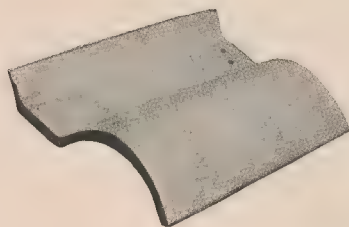




ABOVE—INTERIOR.  
LEFT—EXTERIOR, LIBERTY  
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# SANTA BARBARA CONSTRUCTION LESSONS

## II BUILDING AGAINST EARTHQUAKES

BY HENRY D. DEWELL  
*Consulting Engineer*



THE recent Santa Barbara earthquake has revived interest in the general subject of the resistance of buildings to earthquakes. The subject occupied a most prominent place in technical publications immediately after the California earthquake of 1906, then died down, and was not renewed until the Japanese earthquake of 1923.

Santa Barbara is of especial interest, in that there is presented to the most of us, the opportunity to see, first hand, the action of a reinforced concrete building in an earthquake. This type of construction, it will be remembered, did not exist in San Francisco in 1906, except in floors and walls. There were many reinforced concrete buildings in Tokyo and Yokohama in September, 1923. How these buildings behaved in the earthquake as compared to the structural steel framed building is still a question with many of us. The studies and conclusions of the Japanese engineers and scientists have not yet all been made available to those unfamiliar with the Japanese language. Our information to date is largely based on the reports of engineers representing manufacturers of certain building materials. These reports while no doubt correct for the most part, cannot, for obvious reasons, bear the authority of a report by some national disinterested society.

The American Society of Civil Engineers has had a special committee working on a report on the Japanese earthquake for the past two years. The committee has a wealth of data on the effects of that earthquake, including all of the Japanese reports. Much of this is in Japanese, and still remains to be translated, but this report is expected to be forthcoming in the near future.

The Seismological Society of America has a "Committee on Building for Safety against Earthquakes" which has been at work for over a year. This Committee is composed of representatives from the Seismological Society of America, the American Institute of Architects, the American Society of Civil Engineers, the Board of Fire Underwriters of the Pacific, the City of San Francisco and the City of Los Angeles, the writer representing the American Society of Civil Engineers. This committee is in close touch with the special committee of the American Society of Civil Engineers. The report of the Committee of the Seismological Society is to be expected in the immediate future.

The purpose of the foregoing is to show that the interest in constructing buildings for safety against earthquakes is on the increase. We are coming rapidly to the realization that we must expect earthquakes of severe intensity and that we must build for them. This interest is not confined to California; the very recent shakes in other parts of the United States remind us that destructive earthquakes have been felt in the past outside the Pacific Coast States, and there is good reason to believe that certain of these regions are seismically active.

One of the most important things in the study of building resistance to earthquakes is that all known facts be considered, and given the balanced weights to which they are entitled.

One of the fallacies that has been bruited about since the Santa Barbara earthquake is that any good construction will satisfactorily resist an earthquake. Without question, a building of any type, will, when constructed of sound materials and honest, skillful workmanship offer a much greater resistance to an earthquake than the same building of shoddy materials and workmanship. But it is futile to say merely that good construction stood and poor construction fell in Santa Barbara. Obviously, any construction that will stand a heavy earthquake is good. Similarly, it is easy to say that any construction that fell was poor. Again, the location of a building with respect to the fault planes, and the nature of the foundation material must be taken into account in rating the building's resistance. And finally, the shock at Santa Barbara does not represent, necessarily, the maximum intensity that may be reasonably expected.

In the discussion of our subject, four important questions stand out.

1. Will a building of any type, designed for the ordinary loads as prescribed by a modern building ordinance, constructed of any of the commonly used building materials of good quality, and with honest skillful labor, satisfactorily resist any earthquake that is likely to occur in California?
2. Can a building be constructed at no exorbitant cost that may be confidently expected to pass through any earthquake that, in California, is likely to occur?
3. What are the most satisfactory types of construction for resistance to earthquakes?
4. What are the principles of design of earthquake resistant buildings?

These are the questions in which the owner or prospective owner of business buildings, the architect, the engineer, and the public generally, are interested.

Certain building materials are inherently unsatisfactory to resist earthquakes. These materials are stone and cement blocks, hollow tile, brick and plain concrete. Such masonry cannot withstand any appreciable tension. Any building whose resistance to earthquake shock depends alone upon these materials is likely to be seriously damaged, and possibly totally destroyed, by an earthquake of any intensity of from VIII to X\*, as measured by the Rossi-Forel scale. Exceptions to this statement may be quoted: in San Francisco in 1906, in Japan in 1923, and in Santa Barbara in 1925. The statement, despite the few exceptions, is generally true. The natural defects of the materials mentioned may be overcome to a certain extent by the use of proper bonding, mortar rich in cement, steel band irons in the joints, proper cross ties and other well known methods of construction. The installation of a structural frame, designed to reduce distortion, will go far to overcoming the natural defects of these materials, and in some cases may completely overcome their natural

(Continued on Page 35)



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		OMAHA



Atlas White  
Portland Cement



# CONSTRUCTION LESSONS FROM SANTA BARBARA

(Continued from page 11)

weakness. Unless the walls of a building have the strength to resist the stresses set up in them, and can withstand the distortion they are subjected to, they will be seriously damaged.

In order that a building may resist an earthquake, it must act as a unit. Every building has an individual natural period of elastic vibration. If it is so constructed that it acts as a unit during the earthquake, it stands a much better chance of withstanding the shock without damage. Conversely, a building of heterogeneous construction not only is ill adapted to resisting an earthquake, but, from the fact that its various parts have different periods of natural vibration, such a building will tend to batter itself to pieces during the earthquake. It is for this reason that buildings without a structural frame, buildings with block construction walls and timber interior are inherently unsuited to resisting earthquakes, and the best of materials and the best of workmanship may not avail to give them seismic stability. Such structures should be limited to low heights when economic reasons make them a necessity.

It is entirely feasible to construct a building at a reasonable cost that will satisfactorily resist an earthquake of the maximum intensity likely to occur. This statement presupposes that the building is located at some distance from a major fault plane, and is on firm soil. Any building located on a major fault plane is certain to be ruptured, if a slip occurs along such fault plane. Any building on a location where actual differential displacement of the soil occurs is almost certain to suffer rupture. Location in the case of a building that must withstand an earthquake is most important.

The additional cost of making a building safe against earthquakes, provided the location is sound, over the design for ordinary vertical loads is not great; such additional cost will not exceed from five to seven percent of the cost of the building as ordinarily designed, and will usually be considerably less. If proper provision for wind be considered as a legitimate cost of the building, which it always should be, then the additional strength for earthquake resistance will be small.

Unity, lightness, elasticity and strength are the essential factors in an earthquake resistant building. The small timber-framed building is the most satisfactory type. For commercial and public buildings, the steel framed building, with reinforced concrete walls stands out pre-eminently, in the writer's opinion, as the most satisfactory type of building. Second, the writer places the reinforced concrete building, of moderate height. The building with a structural frame of steel and brick walls is placed third, and the building with reinforced concrete frame and brick walls fourth. Hollow-tile panel walls are not satisfactory, in the writer's opinion.

The proper location of a building is all-important, as has been stated previously. Given a proper location, what are the principles of design to be followed? Two classes of buildings are to be considered, the classification resting on the natural period of elastic vibration of the building. The period of a destructive earthquake varies from about one-half second to one and one-half seconds, and may be said to average about one second. If the natural period of vibration of the building be one second or less, it may be classed, as the Japanese seismologist Omori has placed it, as a "short column, being seismically weakest at the base. If, on the other hand, its natural period of vibration is materially in excess of one second, it is classed by Omori as a "long column." It then appears that the building tends to rotate about a center of instantaneous rotation located at a point roughly at two-thirds its height. It is then seismically weakest at a zone of which

the instantaneous center is the centroid. The Claus Spreckels Building has a natural vibration period of 2.3 seconds. The damage to the walls in the 1906 earthquake was confined to a zone extending from the tenth to the sixteenth stories.

Buildings of the first class are rigid structures, and the force of the earthquake is to be taken as applied at the ground, and equal to the product of the mass of the building by the acceleration of the ground. This force must be resisted by the structural frame of the building, and the walls, in proportion to their respective rigidities. The methods of design are similar to the methods of design for wind. In fact, the earthquake force may be replaced by the computed equivalent wind, and the design then made for such equivalent wind pressure.

Buildings of the second class must be given special attention in the area adjacent to the "instantaneous center" or the "center of percussion," as the point is often called. The earthquake force is to be regarded as an impulsive one, and the design made accordingly. The calculation of shears and moments for this case is somewhat involved, and beyond the limits of this paper. It may be said, however, that for the case of a slender, free, rigid body, of uniform section, acted upon by an impulsive force at the base, two points of maximum shear occur, one at the base, and one at the position of "instantaneous center."

The special committee of the American Society of Civil Engineers who reported on the damage done to buildings in the 1906 disaster, gave as their opinion that a building consistently designed for a wind pressure of 30 pounds per square foot of exposed surface would safely withstand an earthquake of an intensity equal to that of 1906. The structural steel framed buildings which successfully withstood the 1906 earthquake were, in general, designed for 30 pounds of wind. The Claus Spreckels Building, at Third and Market, suffered practically no damage to its structural frame. It was designed for a wind pressure of 50 pounds per square foot. The San Francisco Building Ordinance of 1907 specified a wind pressure of 30 pounds. Today our ordinance specifies a wind pressure of but 15 pounds, and increases the unit stresses in structural steel  $12\frac{1}{4}$  percent over those prescribed in 1907. It is obvious from what has been said of the similarity of stresses due to earthquakes and those due to wind that the connections of beams and girders to columns is most important. The "standard" web connections for steel beams to columns, while satisfactory for vertical loads, are insufficient for resistance to lateral forces. Especially in the lower stories, all connections of beams to columns should be able to develop the full bending strength of the beam. Deep spandrel girders with grooved plate connections should be employed, and diagonal bracing should be used where possible. Splices in columns need to be carefully designed. The steel framed office buildings erected in the immediate years after 1906 were conspicuous by reason of heavy bracing. The same comment cannot be made of similar structures today.

Reinforced concrete walls should be designed for the shears they will be subjected to. The standard six-inch reinforced concrete wall of the San Francisco Building Ordinance, which, by the ordinance, may be used for bays of 350 square feet, was never specified from any consideration of earthquake stresses. In the writer's opinion it is unsuitable for resistance to earthquakes. The mere fact that in this standard wall, the vertical reinforcement is less than the horizontal reinforcement, is sufficient to show its inadequacy. The oscillating shear of the earthquake produces alternate tension and compression on planes at an inclination of 45 degrees with the vertical. This action is evidenced by the familiar X cracks seen in the building walls after an earthquake. Los Angeles requires a minimum of an eight-inch wall, reinforced in

(Concluded on page 37)



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# CONSTRUCTION LESSONS FROM SANTA BARBARA

(Concluded from page 35)

both faces, and such wall, the writer believes, is the minimum which should be allowed, at least in the lower stories.

Heavy cornices are a menace, and are almost certain to be thrown down. Tile roofs are also a menace, and, if used, should be thoroughly anchored to the roof. The practice of tying tile by copper wires set in the concrete roof slab has become common in San Francisco. The writer questions whether this method of construction is satisfactory. Much to be preferred, in his opinion, would be the actual setting of these tile in cement mortar, reinforced with suitable rust-resisting reinforcing mesh. Heavy ornamentation is obviously unsuitable to resistance to earthquakes, no matter how well tied to the building. If safety to the public is to be assured, other architectural treatment than heavy massive ornamentation of our office buildings must be found.

Of the greatest importance is the construction of our schools, churches, theatres and other places of public assemblage. We are all familiar with the economic factors that, unfortunately, take precedence over all other considerations. Bond issues for schools are found to be insufficient to fulfill the promises of the school boards; result, more schools of cheaper construction. Churches have a difficult time to raise a sufficient sum for proper buildings. Theatres are constructed to just meet the minimum requirements of the building ordinance, in order that the profits may include every cent possible. And the minimum requirements of our building ordinances do not, unfortunately, meet the requirements of safety against earthquakes. Have many theatres in San Francisco been

designed for lateral forces, such as an earthquake brings into play? Yet the cost of the additional bracing would be slight, as compared to the cost of the building.

Structural steel and reinforced concrete stand out as the most satisfactory of all the non-combustible materials in resistance to earthquakes. But both structural steel and reinforced concrete must be properly designed to satisfactorily function in this respect. The light structural steel frame, designed from considerations of vertical loads alone, is by no means "earthquake proof." The next earthquake of destructive intensity, sure to come, will take its toll of such structures.

The stresses set up in a building are quite similar in their nature to those due to wind. The wind force on a building is proportional to the area of the exposed wall of the building; the force of the earthquake, other factors being constant, is proportional to the mass of the building, and, consequently, to its weight. The distribution of the force of the earthquake to the various parts of the building is dependent on the construction.

Finally, the proper design of an important building for resistance to earthquakes is a problem worthy of the best engineering study. Rough assumptions will not suffice, and the "valor of ignorance" will not save the building when the time of stress occurs.

Our building ordinances need to frankly recognize earthquakes, and to provide such restriction as will remove public danger. Evading the issue by prescribing wind pressures in lieu of earthquake forces will not suffice; witness the San Francisco ordinance. Architects and engineers must lead in seeing that our building ordinances cover the risk to which our cities are subjected.

## THE SANTA BARBARA CITY HALL

BY E. KEITH LOCKHARD

Architect

THE Santa Barbara City Hall, built during the year 1923, is a building of approximately 7000 square feet area on each floor. There being a basement or ground floor which is full story in height on about one-half of its exterior wall space and above this ground floor is a main floor and a second floor making practically a 3-story building.

In general it is T-shape in plan and at one of the interior angles of the T is a stair well with reinforced concrete walls and steps from the basement floor to the roof. Next to the other interior angle of the T is a superimposed vault with reinforced concrete walls and floor slabs. This also runs from the basement floor to the roof.

The general construction of the building is, from the footings to the first floor level, reinforced concrete columns, exterior walls and floor slabs. From first floor up to the roof the exterior walls are 13-inch brick, interior columns, floor and roof slabs are reinforced concrete. The floor slabs are of joist construction carefully designed and detailed for positive and negative bending moments. Also each slab is tied to the walls by a continuous girder of reinforced concrete around entire exterior of building. Interior partitions are of hollow clay tile anchored to all concrete columns and brick and concrete walls with corrugated iron anchors 12 inches o.c. vertically. The

mortar for hollow tile and brick work is a one-to-three mixture of cement and sand, with 12 percent hydrate lime in bulk added to the cement. The reinforced concrete was carefully designed and detailed and was thoroughly inspected as it went in. Steel mats were used in footings and a heavy welded mesh was used in the basement floor which was laid directly on the ground. The columns are reinforced with vertical bars and hoops. Girders and beams were carefully designed and detailed for positive and negative bending moments, and the shear was taken care of by bent stirrups.

The entire exterior walls are plastered with a cement plaster. The roof, part of which is tile and part gravel, is framed on top of the roof slab with wood framing and sheathing. However, the portion of the roof over the Council Chamber, which is tile, is framed with steel trusses, wood purlings and rafters and steel joist are used for the ceiling over this portion.

In general, we believe that in this building, as well as various other buildings handled through this office which withstood the severe test of the recent earthquake in Santa Barbara, that careful design and inspection have made up the qualities which any building should have to withstand such emergencies.

According to W. R. Fawcett, secretary of the Pacific Clay Products Co., the trend of large building construction is toward face brick. He points to many conspicuously beautiful large buildings erected during the last few years and says they form a fresh note in building design because of their rich color, which does not dim and lose luster.

For every month since May of last year, Portland, Ore., has reported a substantial gain in building permits over the total for the corresponding month of the year before. Its August total this year was \$3,544,110.

S. Charles Lee, Architect, is now located at 530-31 Petroleum Securities Building, Los Angeles.

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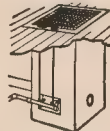


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# MODERN HEATING AND VENTILATING PROBLEMS

I

## RANGES AND COOKING EQUIPMENT

BY THOMAS B. HUNTER  
*Hunter & Hudson, Consulting Engineers*

**AUTHOR'S NOTE**—This is the first of a series of informative articles regarding the selection and installation of modern types of cooking, water-heating and space-heating equipment. The second will appear in the November issue.



IN DESIGNING a home, we all appreciate that the modern kitchen is quite as important as any room in the house. We all recognize that it must be clean, the cooking apparatus must be convenient and labor-saving. Cooking must be safe, dependable, healthful and easily controlled with a minimum of effort. What fuel best meets these requirements?

All domestic science classes of high schools and cooking schools, or nearly all; the kitchen departments conducted for experimental purposes by the Ladies Home Journal and other recognized national authorities; the hotels, hospitals and restaurants—wherever good cookery is the first essential—use gas ranges.

Let us accept, then, that gas is the ideal fuel for use in the modern home kitchen; that it is not only the scientific way, but the cleanly and economical way, to prepare food. We come, then, to the question of how the designer of a home should go about it to insure that the occupants of that home may have the advantage of the most modern cooking, water and house heating methods. Many architects are giving as much thought to the kitchens they build as to any other part of the house, and some carry it so far as the specifying of the proper type of range and heater to be used.

In this connection, a friend remarked to me not long ago: "Why, my kitchen is the most pleasant room in my house—and the most sensible. With its tiled sink drains, immaculate floor, enameled walls and convenient modern fixtures, and its spick and span enameled gas range, an oven which makes it unnecessary to stoop, thermostatic control so that a complete and appetizing meal may be prepared and left to cook automatically while we entertain company or go for a ride, it is a model of efficiency."

"You professional men who have to do with building ought to insist on every home you build nowadays having these conveniences. They are no longer luxuries or experiments; they are necessities."

It cannot be denied, then, that we should give some thought to the provisions we make for our kitchens and their equipment. In the case of gas ranges, the minimum flue area for the vent should be four inches in diameter. It is better practice to provide a flue at least six inches in diameter in order to allow for the incinerator's use at the same time all of the range burners may be turned on. Where a battery of ranges make use of a common flue, as in an apartment house, the total area provided should be the equivalent of at least four inches in diameter for each range. Six inches is better.

Not only is the size of the flue important, but the flue outlet should be brought to the proper height above the roof. In every case, this height should be great enough to eliminate down draughts entirely. It should be higher than the highest point of the roof. There should be no deviation from this rule and yet an investigation would surprise you, for you would find that these important rules are violated almost every day.

In designing the kitchen, the range should be so placed that the lighting comes from either the right or the left. It is not necessary, that a vented hood be installed to carry off the cooking odors and prevent them from penetrat-

ing the living rooms of the house, over a gas range. With a gas range, however, it is practicable to dispose of cooking odors by preparing odorous foods in the closed, thermostatically-controlled oven.

Many of the newer kitchens of the most popular type provide a transom, installed just above the windows over the kitchen sink, where it serves the double purpose of affording additional direct daylight and permitting ventilation of the inside area without opening windows and doors, with their attendant draughts.

In planning the truly efficient kitchen, the range should be adjacent to, or directly opposite, the kitchen cabinets. An ideal arrangement, where two cabinets are provided, is to place the range between them and opposite the sink. The minimum space to be allowed for a gas range is 36 x 52 inches.

It is not the purpose of the writer of this article to say that this trade-marked brand or that trade-marked brand of range is better than another. An infinite variety of satisfactory gas appliances of all kinds for all purposes is now available. But it can not be too strongly insisted that the best type of gas range is that which is provided with lids and a covered top. The greater economy, more uniform heat, use of a single burner to supply heat to the entire top surface of the stove, convince us that this is the best of the many excellent ranges now offered.

There has been rapid development in design and construction of gas appliances generally so there is a model now available for every conceivable kitchen duty. Many of them are provided with garbage incinerators: all are designed to occupy the most compact space. The better ones are beautifully enameled and designed to make the kitchen a spot of brightness and cheerfulness, instead of a place of drudgery.

The advantages of the modern enameled range with its covered, uniformly heated top, its incinerator for the quick and easy disposal of garbage, its 32-inch-high oven, its ease of regulation, its automatic thermostat control, are too numerous to be ignored in any consideration of the modern kitchen—the most-used room in the house.

It will be of the greatest advantage to all concerned if the client will determine not only the kind of fuel to be used but the type and size of the range to be installed before the plans are drawn. The real reason many misconceptions regarding the use of gas and a failure to appreciate its healthfulness have been permitted to grow up in some quarters can almost always be traced to a failure on the part of the designer to provide adequate vents and flues.

The flue is all-important. The minimum diameter for any gas range flue should never be less than four inches, six is better and the top of the flue above the roof should never be lower than any part of the roof. Where patented chimneys, installed in short lengths, are used, it should be insisted that the joints be closed tightly. Where the rectangular shapes of this type of flue are used the cross sectional area should be slightly greater than the area of the circular ones given, to assure adequate capacity for carrying off exhaust gases.

Where there is an instantaneous, or storage, water heater, additional flue space invariably should be provided but, of that, more in the next article of this series, when water heaters will be discussed.

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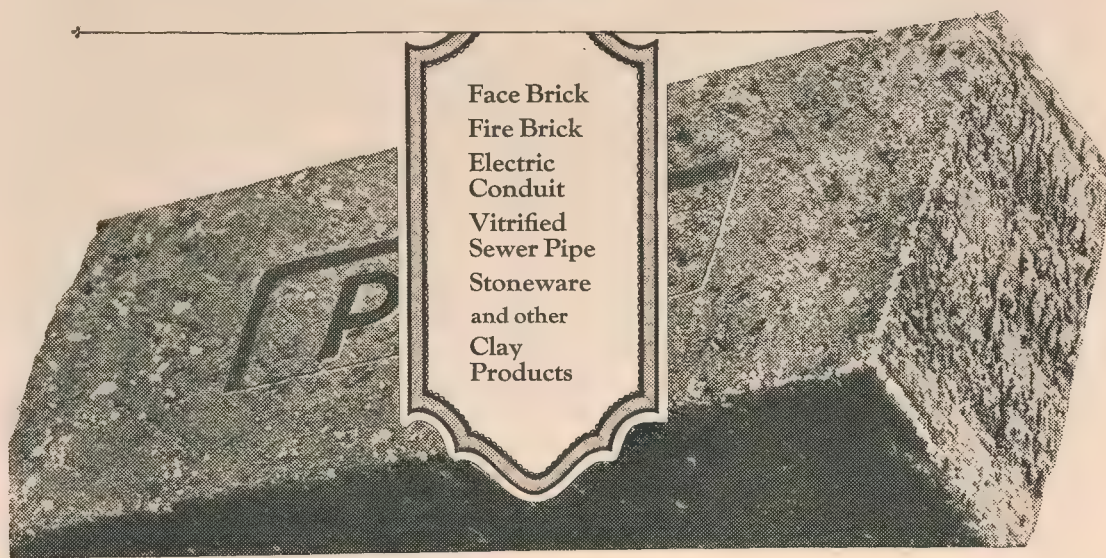
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## CARMEL-BY-THE-SEA SCHOOL

BY HARRIS ALLEN, A. I. A.



CARMEL-BY-THE-SEA is sometimes called "The Land of Un-suppressed Desires;" it is certainly a Paradise for Artists, and while it holds many mortals like the rest of us, it is also the haven for some immortals. To describe Carmel adequately requires an appreciation of the simplicity of life there, for its residents are international in taste and refinement, free in thought and action. A school for its children should in some measure typify the atmosphere of this place, so when the architect, John J. Donovan, was commissioned

to solve this interesting problem he was impressed with the thought that simplicity, quietness, the domestic quality of a home, should be the governing motives.

This is not easy to accomplish and yet adhere to the recognized standards of lighting, hygiene and facilities for group education. If it were possible to limit the class numbers to five, ten, fifteen or even twenty, no doubt the architecture of schools would be simpler and would express more the intimacies of the home, but when classrooms require seating from thirty-five to fifty-five, the problems of adequate lighting, ventilating and unit space volumes enter into the problem, and considerably affect not only the plan but the composition of the architecture of the exterior. This is true as well in orienting the building.

(Concluded on Page 45)





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# NATIONAL BUILDING LABOR SURVEY



NOTWITHSTANDING the tremendous volume of building, there are indications that the period of rising wages in the construction industry is nearing an end, according to a national building labor survey made public by S. W. Straus & Co.

Current building labor conditions are summed up as follows:

(1) National movement for higher wages seems definitely checked for the present.

(2) Wage rates show greater stability although there is still some slight upward tendencies.

(3) No indication of a general movement to reduce wages and only few cities report any downward revision of scales.

(4) Longer agreements being signed by contractors that will tend to stabilize the industry.

(5) Except for several jurisdictional disputes, labor is fairly tranquil.

(6) Building labor is well employed and only an occasional shortage of skilled craftsmen is reported.

(7) Bonus payments and practice of contractors bidding against each other for men have largely disappeared.

(8) Unskilled labor maintains high rates, although supply being increased by slackness of factory employment.

(9) Bulk of common labor supply needed for building industry being furnished by Canada and Mexico, as immigration laws have considerably reduced supply from Europe.

(10) Apprenticeship schools steadily increasing supply of skilled building craftsmen.

"While the wage changes reported during the last month still show an upward movement among the building trades," said the Survey, "the number of increases is insignificant compared with previous months this year and in the last four years. The majority of increases that were granted were reported from cities where the wages being paid are not up to the level of larger cities where the maximum rates set the pace for the industry."

"Reports from all sections of the country indicate that the period of rising wages is drawing to an end, as there are very few increases being recorded in cities where high wage levels exist."

"Today a building program is going forward that would have been seriously handicapped for want of labor in the years of 1922 and 1923, when bonus payments, labor shortage and material scarcity was disrupting the building industry. The practice of contractors bidding for men has largely disappeared. Only an occasional shortage of plasterers, bricklayers or carpenters is reported. It appears to be the disposition of the contractors to renew present scales and there is no indication of any general movement to reduce wages. There is a growing tendency on the part of employers to make two or three year agreements instead of one year contracts because it is felt that the longer agreements will tend to stabilize the industry."

"Both laborers and employers are showing a disposition to peacefully adjust their differences although contractors are increasing their resistance to demands for higher wages. Diplomacy is taking the place of strikes and lock-outs and the industry is proceeding without any serious disturbances. Aside from the jurisdictional dispute existing between the bricklayers and plasterers in New York, Chicago, Washington and Detroit, and the controversy between the carpenters' and bricklayers' unions, the labor situation is fairly tranquil compared with other years."

"Reports from various sections of the country indicate that the supply of both skilled and unskilled labor is ample to meet the needs of the industry, except in a few of the larger cities such as New York, Denver and San Francisco, where there is a slight scarcity of bricklayers, plasterers and carpenters. Many cities, such as Atlanta, Baltimore, Birmingham, Dallas, Kansas City and New Orleans report a surplus of both skilled and unskilled labor."

"The supply of common labor has been considerably augmented during the last few months by the slackening of employment in industrial plants. On the other hand the restrictive immigration laws have reduced, to a considerable extent, the supply expected from Europe and the bulk of common laborers needed for the construction industry is being furnished by Mexico and Canada. More common laborers are leaving than are coming to the United States since the recent immigration law became operative. There were 27,908 common laborers admitted from July, 1924, to April, 1925, as against 97,886 during the same period a year previous, but 44,750 left the country during the same time, making an actual deficit of 16,842."

"The release of thousands of laborers due to the slackening of factories has, however, had a tendency to benefit the building industry. Availability of this supply has reduced the common labor rate of the Nation to 53 cents per hour compared with 56 cents per hour in July, 1924."

\* \* \*

## CARMEL-BY-THE-SEA

(Concluded from page 43)

The plan shows four classrooms and a kindergarten. The classrooms will seat approximately forty-five pupils, while the kindergarten will care for thirty. The building is located on a hillside and faces the playground on the East. The classrooms have south and east light, which is most favorable, because the mornings are usually overcast with the fog from the Bay. The sloping site prompted an open court where the smaller children might play and gambol; it also permitted the east section of the building to be two stories in height, thereby providing a fine play room space in the basement section of this wing.

The roof will be of tile and the walls stuccoed with color. The plaster will have a rough texture and bright colors will predominate, which, with the setting of pine trees and foliage into which the building nestles, should prove interesting.

## The Pacific Coast Architect

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MARIEMONT, the new village now in course of development in a happily situated region just beyond the corporate limits of Cincinnati, is a forward-looking interpretation of modern city-planning principles applied to a small self-contained community.

Though primarily intended as a residential district for wage earners of various economic grades, the houses, built and projected, are remarkable for their architectural quality and for the character of their construction and appointments.

Kohler Enameled Plumbing Ware is being used, again demonstrating the suitability of this admirable ware—of highest quality but no higher cost—for installations of large scope.

KOHLER CO., *Founded 1873*, KOHLER, WIS.  
*Shipping Point, Sheboygan, Wis. • Branches in Principal Cities*

# KOHLER OF KOHLER

*Enameled Plumbing Ware*



## EDITORIAL

### *Aesop to Date*

ONCE there was a Fancy Dress Party with Nice Prizes for the best costume. A Pretty Girl named Barbara made herself a stunning Spanish Outfit, but one of her Parents (who must have had a dash of Puritan blood) said: "You don't look like a Decent Amurrikan Girl" and insisted on her wearing a Gingham Apron over the dress.

At the Party, Barbara's friends were Extra Nice to her (in that Sympathetic Way). But when a Strange Girl named Mayme came in all made up to kill like a Regular Carmen, the Men all Buzzed around her like Toreadors Rushing the Bull, and the Judges gave her the Prize.

MORAL: Compromises may prevent trouble, but they don't Win Prizes.

\* \* \*

### *Free Engineering Service*

THE "Western Architect" prints an interesting report on "Free Engineering Services" submitted by a joint committee of Chicago architects and engineers. After giving specific complaints from various sources, it draws fairly definite conclusions, from which we quote:

"Engineers, architects, manufacturers and contractors should co-operate, insofar as possible, to eliminate objectionable practices, whereby unfair advantage is obtained on the part of one at the expense of the other, or where the buyer may be imposed upon.

"It is perfectly evident that there is no such thing as free engineering. There must be a sufficient remuneration. It is in the interest of all that this remuneration should be fair and open. An exorbitant remuneration should not be concealed in the price of the article or device. . . .

"No consulting engineer or architect should fail to advise himself regarding available equipment by consultation with the manufacturers' experts. There is no other way to apply correctly the best devices to the required service. However, no self-respecting engineer or architect will secure from a manufacturer the design of a structure or a part of it, under an implication that a purchase will be made from the manufacturer, and then turn over to the client the result of this work as his own."

### *Opportunity for Service*

OCTOBER brings again the annual outcry against losses by fire, and the observance of "Fire Prevention Week." Perhaps this does good; it seems to be one's duty to urge its observance; yet the total of fire losses keeps mounting hugely, year after year.

The suggestion came from one of our correspondents (that he is connected with the manufacture of cement makes it none the less interesting) for a movement to strengthen building codes; if not to the requirement of 100 percent "firesafeness," at least to the insistence on fire-safe construction in schools, theatres, hotels, apartment buildings, all structures housing human beings for some length of time.

We are quite in accord; but in view of the "construction lessons from Santa Barbara," which we are publishing in series, we would urge that requirements for earthquake-resisting methods should be added.

To architects, engineers, and responsible contractors, separately and jointly, is offered the opportunity for public service of great value. For without their strong and continued urge, ordinances are not likely to be improved.

### CIVIL SERVICE EXAMINATIONS

THE United States Civil Service Commission announces open competitive examinations for Engineer, \$3,800; associate engineer, \$3,000; assistant engineer, \$2,400. The entrance salaries are as shown, promotion may be made in accordance with civil service rules. Competitors will not be required to report for examination at any place, but will be rated on their education, experience and fitness; and writings to be filed with the application. Receipt of applications for the positions listed will close October 20, 1925. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the Board of U. S. Civil Service Examiners at the post-office or customhouse in any city.

\* \* \*

The Board of Trustees of the Inglewood Schools has decided to use Pacific Vented Gas Radiators, according to A. J. Hartfield, president of the Pacific Gas Radiator Company of Los Angeles.

\* \* \*

John C. Austin, F. A. I. A., and Frederic M. Ashley, A. I. A., Architects, are now located at 605-610 Chamber of Commerce Building, Los Angeles.

\* \* \*

Sales of hydrated lime in 1924 were valued at \$13,199,846, an increase of 7 percent in quantity, and 8 percent in value, over the preceding year.



### The Symbol of a Service

THIS SACK with its blue and red stripes may be regarded as the symbol of a service. For Plastite—the product thus distinctively packed—is a cement having not only *all* the properties of plain Portland, but the desirable additional properties of water-titeness and great plasticity. The architect can, therefore, definitely include Plastite in his specifications in the full assurance that the owner's best interests are being served. The builder and plastering contractor can order Plastite with the knowledge that it is *standard* for all purposes where a water-tite cement is necessary, and its plasticity makes for his convenience and economy. The owner who sees the blue and red sack on the job is assured that the best material known is going into his building. His satisfaction will increase, because with the passage of time, stucco or concrete made with Plastite becomes harder, denser, and even more impermeable. And this distinctive package is also a *protection* against mistakes.



Plastite performed its part in creating the beautiful and unique "French Village" at Calhenga and Highland Avenues in Hollywood. This delightful bit of old France was conceived and executed by Pierpont and Walter Davis, architects, for the Davis Development Corporation. A fine double-page photo of these houses will be found in the October issue of "PLASTITE PROGRESS"—a monthly magazine issued in the interests of better building. A copy will be sent to you free upon request.

## RIVERSIDE PORTLAND CEMENT CO.

724 SOUTH SPRING ST.

LOS ANGELES

TRINITY 5951



# SAN FRANCISCO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS MONTHLY BULLETIN

## OFFICERS

J. S. FAIRWEATHER, President  
JOHN REID, JR., Vice-President  
ALBERT J. EVERS, Sec.-Treas.



## DIRECTORS

EARLE B. BERTZ, three years  
WILL G. CORLETT, three years  
GEORGE W. KELHAM, two years  
ARTHUR BROWN, two years  
J. HARRY BLOHME, one year  
WILLIAM MOOSER, one year



THE next meeting will be held Tuesday, October 20, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell Street, at 6:30 P. M. Dinner will be served at 75 cents a plate. Election of officers for the ensuing year will be held. Be sure to attend this meeting.

## SEPTEMBER MEETING

The regular meeting of the American Institute of Architects, San Francisco Chapter, was called to order by President Fairweather at 7:45 P. M., on Tuesday, September 15, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell Street. The following members were present: Morris M. Bruce, Earle B. Bertz, John Reid, Jr., J. S. Fairweather, S. Schnaittacher, Harris Allen, Ernest Coxhead, William Bliss, Albert J. Evers.

## MINUTES

The minutes of the previous meeting were accepted as published.

## OLD BUSINESS

The Secretary reported that he had been unable to get action on the question of newspaper racks and had returned Mr. Uhl's check to him.

## COMMITTEE REPORT

Mr. J. Reid, Jr., reported progress in the work of the Industrial Committee.

The Committee on the Allied Arts Exhibition in New York, April, 1925, reported a deficit of \$63.33, which was paid from the Chapter treasury. The report was received and placed on file.

## NEW BUSINESS

The Secretary read a communication from the Post Office Department, urging all architects to provide letter boxes and letter slots to serve residences, building and offices. Mail will not be delivered where proper receptacle is not provided.

A letter from the Chicago Chapter dated June 30, was also read. This letter is as follows:

"Will you be kind enough to extend to the members of the San Francisco Chapter, A. I. A., a most cordial invitation from the Chicago Chapter, A. I.

A., to join us at lunch at the Architects Club, 1801 Prairie Avenue, whenever a visit to Chicago will permit."

The Secretary read a letter from O. R. Thayer, regarding the practice of architecture by others than licensed architects. Moved, seconded and carried to send a copy of the letter to the Industrial Association and the Builders Exchange.

A letter from Mr. E. C. Kemper regarding the increase of Institute dues was read to the Chapter. After some discussion it was decided to let the matter drop.

The Secretary reported that he had followed through the matter of the funds of the defunct San Francisco Society of Architects and that Mr. Gutterson had given him definite information that the funds were voted for some other purpose.

The Nominating Committee, consisting of Mr. Earle B. Bertz, G. F. Ashley, E. B. Hurt, S. Schnaittacher and J. S. Fairweather, nominated the following members for office for the ensuing year: President, John Reid, Jr.; Vice-President, Harris Allen; Secretary & Treasurer, Albert J. Evers; Directors for 3 years, J. S. Fairweather and W. C. Hays.

Directors Bertz, Corlett, Kelham and Brown have unexpired terms to fill.

The President called for nominations from the floor. There being none, it was moved, seconded and carried that the nominations be closed.

Regional Director Schnaittacher reported on the proposed Regional Conference and Institute Directors meeting for next December 3rd, 4th and 5th.

Moved, seconded and carried to refer the matter to the Board of Directors of the Chapter in co-operation with the Regional Directors.

Mr. Harris Allen brought up the question of revised ordinances covering better construction for earthquake safety. Moved, seconded and carried that the Secretary write to the American Society of Civil Engineers and Builders Exchange regarding a joint committee for recommendations regarding the San Francisco building ordinances.

There being no further business, the meeting adjourned.

Respectfully submitted,

ALBERT J. EVERS, Secretary.

## DURANT HEATING SYSTEM

ONE of the most palatial residences in Southern California is being built by R. Clifford Durant, millionaire motor manufacturer, for his mother. According to A. J. Hartfield, president of the Pacific Gas Radiator Company, of Los Angeles, he is elated because ten Pacific Unit furnaces will be installed in the basements and operated from upstairs by electric thermostat. Koerner & Gage are the architects and the home, which is located opposite the Doheny estate in Beverly Hills, will possess every convenience, including swimming pool, bowling alley and large ball room.

## NEW ANCHORED BRICKWORK

BERGWALL anchored brickwork is the name adopted by the Port Costa Brick Company for a new form of patented construction, just announced. Bricks with hollow spaces are laid in the wall in the usual manner and tied with galvanized metal clips. Walls may be of solid or hollow construction. It is claimed for Bergwall construction that it has the solidity of ordinary brickwork, plus positive anchorage and that it provides damp-proof surfaces for plastering. Detailed information may be obtained from the offices of the company, 808 Sharon Building, San Francisco.



Athens Athletic Club, Oakland

Architect, Wm. Knowles, San Francisco, Oakland  
 Construction Engineers, MacDonald & Kahn, San Francisco  
 Painting and Decorating, Heinsbergen Decorating Co.,  
 Los Angeles, Oakland, San Francisco

## *Architecture and Athletics*

have joined hands in the erection of the Athens Athletic Club, Oakland, an architectural masterpiece. We are proud to have had a share in its completion.

## *Perma-Light* Wall Finishes and Enamels

have been used throughout in the decorative scheme.

Made exclusively by

### HILL, HUBBELL & COMPANY

Paint Specialists

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# SAN FRANCISCO ARCHITECTURAL CLUB

MEMBER ARCHITECTURAL CLUBS' TRANSFER SYSTEM WESTERN STATES HEADQUARTERS: SOCIETY BEAUX ARTS ARCHITECTS

CARL R. SCHMIDT, *President*  
ERNEST E. WEIHE, *Vice-President*

THEO. E. RUEGG, *Secretary*  
IRA SPRINGER, *Treasurer*

*Directors:* LAWRENCE H. KEYSER LAWRENCE STIER HARRY LANGLEY



MONDAY EVENING, September 14th, in the quarters of the San Francisco Architectural Club, there was held an Atelier banquet to celebrate the conclusion of the season and to do honor to the two patrons, Mr. Ernest Weihe and Edward Frick. It is due to the devotion and untiring efforts of these two gentlemen, both recently returned from extensive studies in

the famous French national school of architecture, and to their inspiration that the atelier has risen to its present high plane of excellency.

The season just closed has probably been one of the most successful in the recent years of the Club, not only from the standpoint of number of drawings submitted, but also in the consistent improvement in the quality of work and per centage of awards received.

Following the banquet there was held a pre-view of a carefully selected and arranged exhibition of all the best examples of work that had been submitted in the various problems and classes during the season. The exhibition was opened to the general public the following evening and continued throughout the remainder of the week.

The principal motive of the committee in charge of arranging the exhibition was to arouse interest in the Beaux Arts Institute of Design and to acquaint all those

who are not members with the wonderful work that this organization is carrying on in bringing to the young draughtsman and student deprived of college training, the practical equivalent of such training in the principles of design and presentation.

Invitations were extended to all interested high school students to attend the exhibition so that they might have a better knowledge of how they can further their education after leaving school, if they expect to immediately start their training in an architectural office.

The San Francisco Architectural Club is also sponsoring two other projects of inestimable value to the younger draughtsman. One is the organization of a class for the study and presentation of the Orders under competent instruction. This is for the novice whose knowledge of the fundamentals is not sufficient to enable him to enter upon the real Beaux Arts work.

Co-related with this class is a series of illustrated lectures on the early history of architecture, conducted by Messrs. William Charles Hays and Warren Perry, of the faculty of the University of California.

The first lecture of the series was held at the club rooms on Wednesday evening, September 23, and others are being continued at weekly intervals. Entry into either the order class or the lectures may be made at any time and those interested may obtain information relative to them from the secretary of the club at 77 O'Farrell Street, San Francisco.

## AN IMPROVED CEMENT PRODUCT

BY HOWARD NEAL  
*Plastite Department, Riverside Portland Cement Company*

BEFORE announcing Plastite to the trade, two years of research work were completed. It has now been used successfully in the Southwest for nine months. Plastite is a cement having all of the desirable properties of plain portland cement. It makes a mortar or a concrete mix that is more plastic and which cures into a concrete that is watertight.

The research work conducted before introducing it to the trade including highly technical laboratory study and practical field tests: Walls were actually made with the new material. Back of the work done by our laboratories will be found a wealth of data and experience gained from fifteen years of successful use in Europe.

Plastite embodies an entirely new form of waterproofing since no resin, paraffines, fats, soaps or other oily substances are used. A colloidal mineral is ground with a high grade portland cement clinker. These are reduced to extreme fineness. Plastite will average 92 through a 200-mesh screen.

A large tonnage is being used for exterior stucco as well as for concrete. Plastite is especially suitable for the scratch and brown coats of exterior stucco because the mortar spreads easily and sets free from curing cracks. Many reservoirs, swimming pools, etc., have been built of this material successfully.

No extravagant claims are made for Plastite. But it has been proved that it does make a very plastic mix, that it provides a really watertight mortar or concrete which has all the strength of standard portland cement.

## CALIFORNIA BATH POPULAR

LOS ANGELES is the birthplace of a bath-tub which G. B. Schneider, general manager of the Washington Iron Works, declares has set a world record for sales. It is known everywhere as the "California" model. It was formerly made with separate sheets of white enameled metal on the sides and ends. Mr. Schneider says that one of his designers conceived the plan of using tile and, since there was no limit to the type and kind of designs which could be worked in, its popularity was great and the model was adopted by other leading manufacturers until thousands of them have been installed in homes, hotels and apartments.

Clark-Mills Company, Ltd., consulting merchandising engineers and advertising counsellors, announce the removal of their offices from 1625 Broadway to the entire second floor of the Elfen Building, 440 17th Street, Oakland.

Hollow, reinforced concrete walls moulded one course upon the other, eliminating all joints or unions, which gives them, when completed, a solid monolithic mass reinforced with steel, both horizontally and vertically, are gaining in popularity in various parts of the Coast. They are built by the Linthwaite System, Inc., 308 N. Vernon Avenue, Los Angeles.

The volume of August building permits in 369 towns and cities of the United States established a new record for that month, with a gain of 38 percent over August, 1924.

# california

*California White Pine*  
(trade name)

# PINE

*California Sugar Pine*



Fine, delicate grain and soft, easy cutting, non-splitting texture permit cutting sharp, clear profiles and edges.



Grain of California Pines will not "raise" to disfigure or cause cracking or chipping of paint or enamel surfaces.



Soft texture saves time in cutting and fitting the locks and butts, thus effecting great savings in cost of installation.

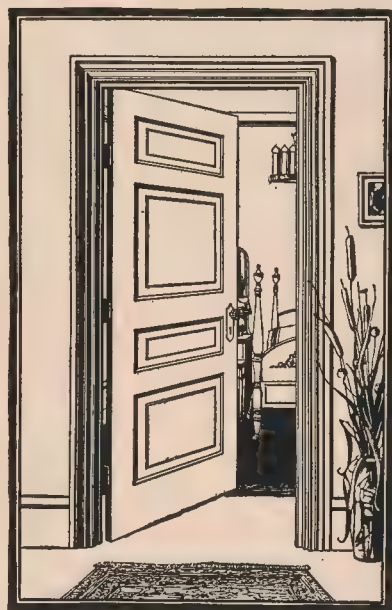
## "The Great American Door"

SOMEONE has referred to doors made of California Pine as "the great American door," because so many of America's well-built homes have doors of this fine wood.

The large sash and door manufacturers make extensive use of California Pine. They say that no other woods meet so well the requirements for door service and window-sash service—the two most exacting general uses to which any soft wood can be put.

One of the largest of these manufacturers whose doors are specified by architects and builders in every section of the country states in his book on doors:

"... doors made of solid California Pine, a soft, close-grained, weather-resisting wood. It has more of the qualities of the old Northern Pine than any wood being cut today in sufficient quantities to provide for the production of soft wood doors. It is a wood suitable for paint or stain and in our judgement is the best wood from which to make solid doors. . . . Large panels usually swell, shrink or check,



but these are made from carefully selected California Pine and true economy results in the purchase of the better article."

That California Pine Doors meet the most exacting service requirements is proved by the fact that more than 5,000,000 such doors are installed every year in American buildings.

If you have not received a set of our Information Sheets on California Pine, let us send them to you. You are also invited to correspond with our Wood Technologist, formerly with U. S. Government Forest Products Laboratory at Madison, Wisconsin, and now connected with this association.

## California White and Sugar Pine Manufacturers Association

685 Call Building • San Francisco

*Also producers of CALIFORNIA WHITE FIR, CALIFORNIA DOUGLAS FIR AND CALIFORNIA INCENSE CEDAR*



# BATCHELDER TILES



[[ Old doorway of Spanish type in a Santa Barbara Home ]]  
Soule, Murphy and Hastings, Architects

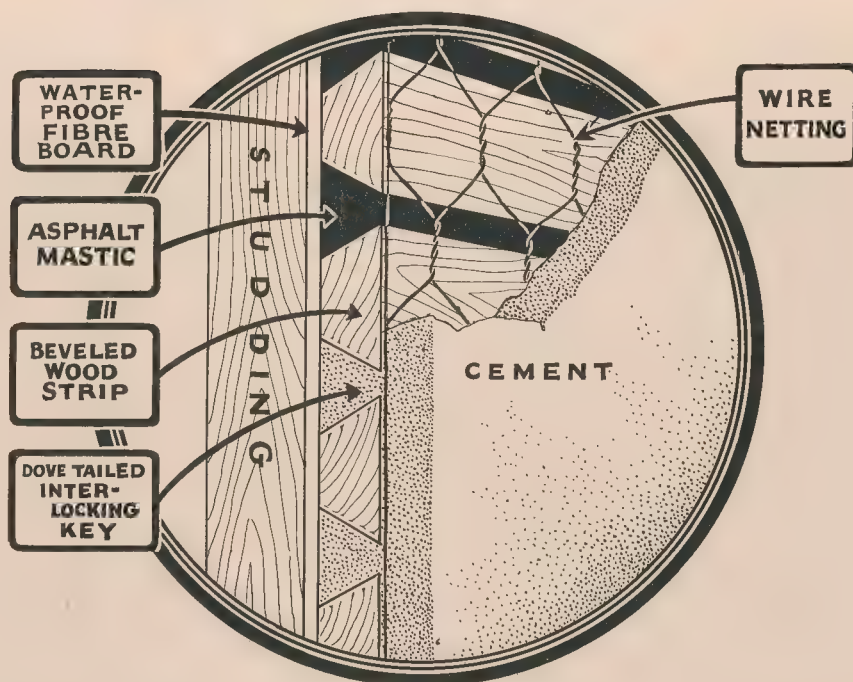
**A**RCHITECTS who have used Batchelder Tiles are delighted with their unusual adaptability...their happy faculty for harmonizing with any decorative motif.

Batchelder Tiles are unique in that they have no glaring highlights, no flashy, flamboyant colors; rather their color tones are rich and subdued, like tapestries mellowed by age.

Literally hundreds of original and distinctive designs are included in the Batchelder line... tiles for fountains, mantels, pavements, wainscoting, baths, etc.

See Sweet's Catalogue or write for complete information.

BATCHELDER-WILSON COMPANY  
2633 Artesian Street, Los Angeles  
101 Park Avenue, New York City



## *This Method of Building Stronger Walls at Lower Cost has Created a Sensation in California!*

All over California the percentage of new homes built with Bishopric Base is mounting month by month!

San Francisco found Bishopric Base 25% cheaper than lumber sheathing! Long Beach found it 241% stronger! Los Angeles has been using this new wall backing for years. In every city in California Bishopric Base is rapidly gaining preference such as it has enjoyed for 18 years in Eastern cities.

Scientific construction is the reason for Bishopric's success. Strong fibre board,

proofed against weather and vermin with asphalt mastic, in which is imbedded doubly-beveled lath. This forms the famous interlocking dove-tail joint which grips the stucco with an iron grasp.

Investigate this nationally used wall backing. In Los Angeles it can be seen in hundreds of homes. In San Francisco, test homes are now ready for inspection. Send for data file with complete information and samples for your use in making up specifications.

BISHOPRIC MFG. CO. of CALIFORNIA

Los Angeles Offices, 604-626 East 62nd Street. Phone AXridge 9108  
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# Bishopric Base

SEE

HOW

IT

LOCKS

THE

CEMENT

For best results, we recommend 18 gauge wire netting to reinforce the cement.



## VALUABLE TECHNICAL BOOK

ONE of the most intelligently treated technical works that has been issued in recent months has just been published by the Hill-Hubbell Company. It contains a fund of valuable information that has never been gathered before and it is published in the most compact and convenient form for engineers and architects.

It is entitled "Modern Practice in Tank Protection," and its wide scope of usefulness is indicated by its chapter headings: "Acid Tanks," "Brine Tanks," "Concrete Tanks," "Expansion Joints," "Oil Storage Tanks," "Tank Cars," "Tank Steamers," "Water Tanks," "Principle of Painting Iron and Steel" (on tanks and steel surfaces of any kind).

The preface of this new book sets forth that it embodies a generation of experience in meeting difficult paint conditions on the part of the Hill-Hubbell Company, which during the four years of the shipping boom, from 1916 to 1920, treated the tanks of 544 steamers. The book was written by Mr. R. H. Hubbell, and the company deserves credit for subordinating the mercantile aspect of the data to the evident determination to produce a handbook of genuine helpfulness to all interested in "tankology." Mr. D. W. Boylan, who has charge of its distribution, announces that it will be supplied free of charge to those interested upon application to the company's San Francisco office. He also advises that this is the first of a series of helpful publications and that one is in preparation for the architectural profession.

\* \* \*

## GLADDING, McBEAN & CO., MOVE

GLADDING, McBEAN & CO., who celebrate this year the fiftieth anniversary of the founding of the firm, announce the removal of their San Francisco warehouse and display rooms from 147 Minna Street, to 1255 Harrison Street, near Eighth Street.

The new location gives far greater space for the storage, handling, and display of their various lines of clay products, and is far more accessible, having team entrances on three streets and a ten-car spur track.

The site occupies nearly half a block. Opposite the office and display room, which are situated near the center of the plant, there is a miniature garden with lawn and shrubbery, designed for the display of garden pottery and furniture in a natural setting. Architects and others interested are urged to visit the new plant of Gladding, McBean & Co.

\* \* \*

Standard Soapstone Corporation announces that it has today completed its organization under the Laws of the State of New York, with a capitalization of \$1,575,000, of which \$1,000,000 is paid in. The Company has taken over the entire assets and business of the Phoenix Stone Co., Inc., which was organized three years ago by W. Wallace Benjamin, in association with Charles O. Heydt and F. A. Benjamin, who have carried on and developed the business.

\* \* \*

Beverly Hills, with \$907,150 in building permits during August, shows a gain of 87 percent over the same month a year ago.

## "FYE-R-WALL" ALL METAL FIRE DOORS

*High Grade Sheet Metal and Kalamein Work*

FIRE PROTECTION PRODUCTS CO.  
3117 TWENTIETH STREET, SAN FRANCISCO

# Artists

and practical painters,  
as well—

Many of the branch Banks of Italy, designed by Mr. H. A. Minton, Architect, and shown in this number, have been decorated by Faggioni Company Studios. The modern bank must have beauty, but it must be practical, too—So it is with theatres. Some of those we have decorated are:

San Francisco . Orpheum  
Golden Gate  
Castro  
Excelsior  
and many others

Oakland . . . . Orpheum  
New Franklin  
Parkway  
Palace  
and many others

Sacramento . . Senator  
Capital  
Godard

Fresno . . . . . Kinema  
Pacific Grove . Grove Theatre  
Honolulu . . . . Princess

A prominent San Francisco architect writes us:

"It gives me great pleasure to compliment you on the artistic and efficient way in which you carried out my color schemes and ideas."

May we serve you, too?

## FAGGIONI Company Studios

*Interior Decorators and Painters*

OFFICE AND STUDIO

160 SOUTH PARK STREET

PHONES / GARFIELD 5850 / KEARNY 411

*Beauty and Character in Every Job We Do*

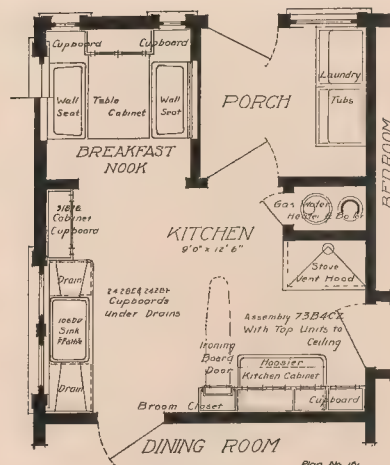
**STRABLE**  
HARDWOOD COMPANY

**THE NEW  
and  
BETTER  
BUILDING  
PAPER**

**Triple = Shrink**

IT IS  
*absolutely*  
**WATER  
PROOF**

**STRABLE**  
HARDWOOD COMPANY  
G.H. BROWN, PRESIDENT  
OAKLAND, CALIFORNIA



When  
Planning or writing  
Specifications  
for  
Homes and Apartments  
have a copy of  
*The New*  
*"Architects Handbook"*  
of Built-In Fixtures  
as a reference



Write for your new revised copy

**PEERLESS**  
*Built-in Furniture*

Manufactured under patents by  
**BUILT-IN FIXTURE COMPANY**  
2608 San Pablo Ave. Berkeley, California



## BRICK CONSTRUCTION BUREAUS

IT IS reported by the Common Brick Manufacturers Association of America that there are now complete information bureaus upon the use of brick in 16 of the leading cities of the country. Engineers are employed in these 16 groups to help the architect and builder with his problems and to give dependable information and estimates of cost to prospective builders. Other groups are being formed and it is planned to have such an information bureau in every important city in this country and Canada.

\* \* \*

## BLEMISH IS NOT A DEFECT

BLUE stain, according to the Research Department of the National Lumber Manufacturers Association is not a defect. In a statement just issued, it says: "By recognizing that blue stain affects lumber only in its appearance, and by accepting blue stained lumber for uses where appearance is not important or, when it is important, where it can be painted or stained, architects and builders will be doing their share to reduce one of the important present economic wastes in lumber distribution."

\* \* \*

## ROOFING TILE FASTENER

The Sullivan Roofing Tile Fastener is a new device just being introduced to the building trades by the Planett Manufacturing Company, of Oakland. Made of No. 11 galvanized wire, the tile fastener hooks through the usual nail hole and the other end, pointed for the purpose, is driven directly into the roof sheathing, eliminating wood strips or wire.

The Planett Manufacturing Company also makes furring devices, including Crowe's Furring Staples and Gem Furring Nails. They make practically all the oven slides for gas stoves manufactured on the Pacific Coast.

Another of their products is the Planett All-Wire Ant-Proof Cooler Shelves, which are extremely sanitary, easy to clean, and give complete ant protection. They also manufacture other household and refrigerator shelves.

This company was established in Oakland three years ago and is now doing a very satisfactory business, selling its products all over the United States. M. B. Thrift is president and F. E. Planett, secretary and treasurer.

\* \* \*

It is announced that the firm of Lehmann & Wuehrmann, Architects, El Paso, Texas, has been dissolved. William G. Wuehrmann, A. I. A., will continue practice at the office which was established in 1919, at 505 Two Republics Building, El Paso.

\* \* \*

Long Beach, California, issued 341 building permits during August, totalling \$6,026,029 in costs, the highest monthly figure in that city's history.

\* \* \*

Henri Polignac, French architect in Hollywood under special commission to build movie sets, is using face brick generally and is quoted as saying that with the various color tones, it is possible to create practically any effect desired.

\* \* \*

The largest order of its kind on record, according to J. W. Ford, Jr., president of the Bishopric Manufacturing Company, has been placed. It is for a full trainload of composition flooring material. Over 513 tons, or enough to fill eleven 50-ton cars, is being shipped. It will be used in a magnificent new country club being built by a group of wealthy Mexican aristocrats a few hundred miles below the American border.



## PROPER LIGHTING



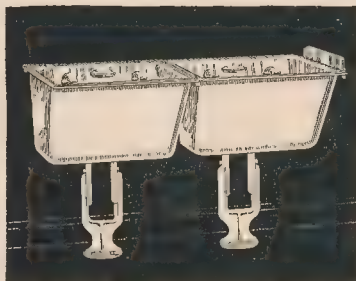
DEAL lighting of a home or place of business is brought about by attention to detail. And that is our forte. Turn your lighting problems over to us. Our recommendations cost you nothing. We will work out appropriate and beautiful lighting effects—furnish estimates and designs.

Have you seen our de luxe booklet "The Fine Art of Lighting." It is yours for the asking. Telephone or write.

**FORUE-PETTEBONE CO.**

*Lighting Equipment*  
818 South Figueroa Street

LOS ANGELES



Pacific Porcelain Enameled Iron Laundry Tray G-840

## Would you wash your face in the same tray you wash your clothes?

You could if it was a Pacific Porcelain Enameled Iron Laundry Tray. Its smooth, white surface is easy to keep spotless—just wipe out and rinse.

But you wouldn't wash your face in any unglazed laundry tray. You would see the scum and the absorbed moisture and filth from previous washings. Their foul or musty odors would repel you.

From the standpoint of sanitation and comfort it is as important that the sink your clothes are washed in be as clean as the lavatory in which you wash your face.

Specify Pacific Porcelain Enameled Iron Laundry Trays

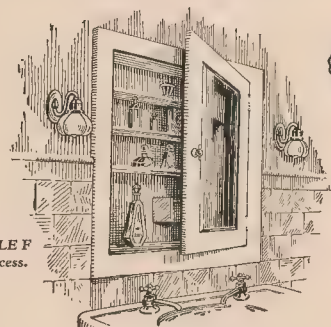


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## PACIFIC PLUMBING FIXTURES

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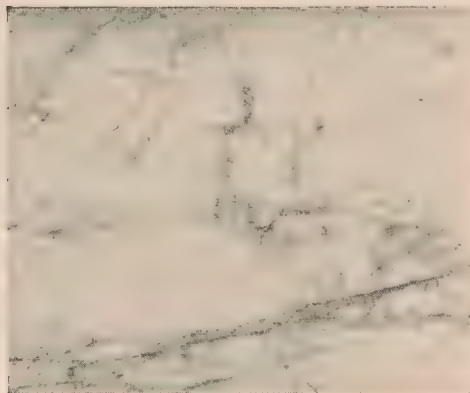
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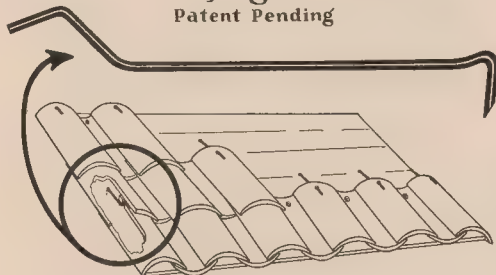
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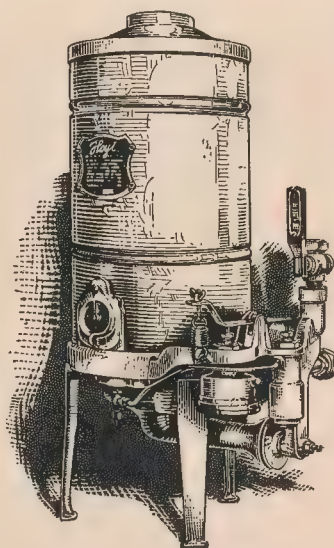
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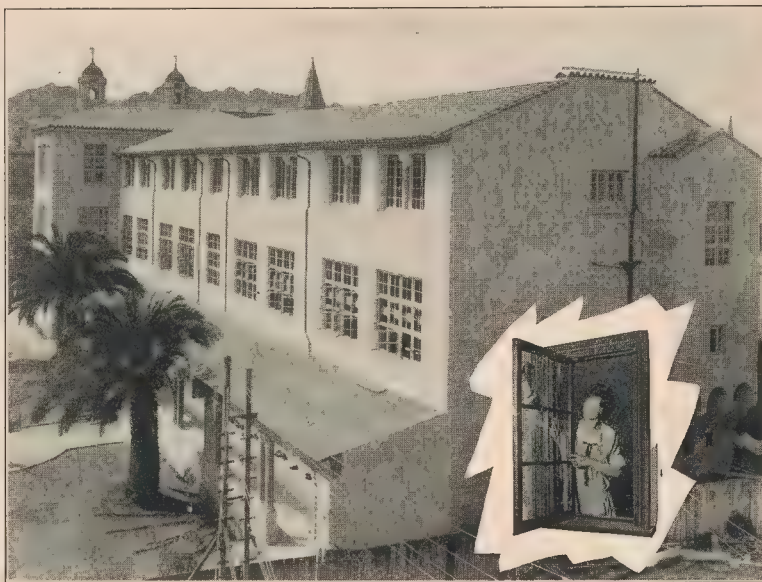
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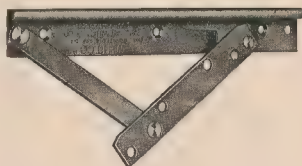
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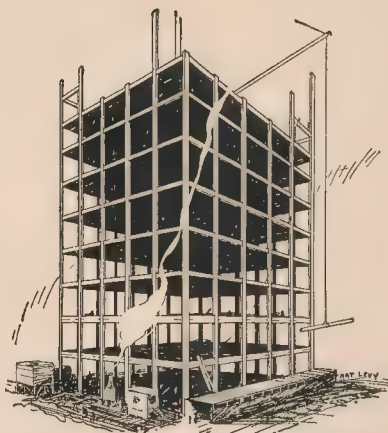
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## SANTA BARBARA AND BRICK

BY PHILIP J. MEANY

AS AN indication of the building activity now going on in Santa Barbara, the brick manufacturers there report a total of 2,000,000 brick manufactured during the month of August alone. This figure is the more impressive when it is known that the total 1924 production in Santa Barbara was less than 3,000,000 brick. These figures have just been given out by Secretary-Manager George S. Summerell, of the California Common Brick Manufacturers Association.

"In addition to their own local production," says Mr. Summerell, "the Santa Barbara brickmakers have had to call on manufacturers in neighboring cities for twenty carloads of brick to help meet emergency requirements. With all four Santa Barbara brick plants running to full capacity, they are only able to supply the most pressing orders. At the rate advance orders are being booked, brick production during September will exceed the August total."

"This is particularly gratifying," declares Mr. Summerell, "because it shows what the people of Santa Barbara think of brick as a permanent building material."

\* \* \*

## PLASTIK WATERTITE CEMENT

FOR waterproof concrete of greater workability, use Old Mission Plastik Watertite Portland Cement, says Herbert Coffman, sales manager of the Old Mission Portland Cement Co., San Francisco.

The new product was first announced to the trade last month, and it is offered to cement-users only after more than two years of experiment, it is said.

It is claimed for Old Mission Plastik Watertite that it assures quicker, easier, uniform pouring, minimum tamping, no excess water, minimum of voids, no patchwork and no after-treatment.

It is claimed that it affords greater plasticity for mortar and stucco, that it saves labor, spreads faster, spreads farther, minimizes shrinkage and minimizes hair cracks. Its light color contributes much to the artistic appearance of finished work. It eliminates efflorescence.

It is further asserted that Old Mission Plastik Watertite Portland Cement, which has been specified already by Dean and Dean, Architects, for the new Sacramento City Orphanage and by other architects for large jobs now under way, is high in strength tests. A tremendous demand is anticipated.

\* \* \*

## SAFER BUILDING TENDENCY

A tendency toward safer building is sweeping the country. The influence of fire prevention and conservation campaigns is certain to effect a change for the better in the home building of the nation. A house built now without the advantages of fire protection offered by proper plastering will be at a great disadvantage if offered for sale in future years.

\* \* \*

## A CLEVER PUBLICITY IDEA

There has been issued by the Jas. L. McLaughlin Co. of San Francisco, a file folder containing several sheets showing photographs of St. Joseph's College, Cupertino. The views are extremely attractive, printed on very thin glazed paper and loosely mounted on heavy stock. Additions will be sent from time to time.

\* \* \*

The Board of Trustees of Inglewood, Calif., Schools, acting on recommendations of engineers as to best heating methods, have adopted Vented Pacific Gas Radiators, according to A. J. Hartfield, president of the Pacific Gas Radiator Company of Los Angeles.



# PACIFIC·COAST ARCHITECT

WITH WHICH IS INCORPORATED THE BUILDING REVIEW



VOLUME XXVIII • NOVEMBER • 1925 • NUMBER • FIVE  
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RESIDENCE OF MRS. ELISE HODGES, SANTA BARBARA, CALIFORNIA

## THE JEWEL OF ARCHITECTURAL CONSISTENCY

[ BY HARRIS ALLEN, A. I. A. ]

WITH but a single exception, the illustrations of Soule, Murphy and Hastings' work here shown are conceived in the spirit of "Mediterranean architecture" which is so appropriate for Santa Barbara, and which the public-spirited leaders of that community are endeavoring, with considerable success, to have generally adopted in the work of reconstruction now well started.

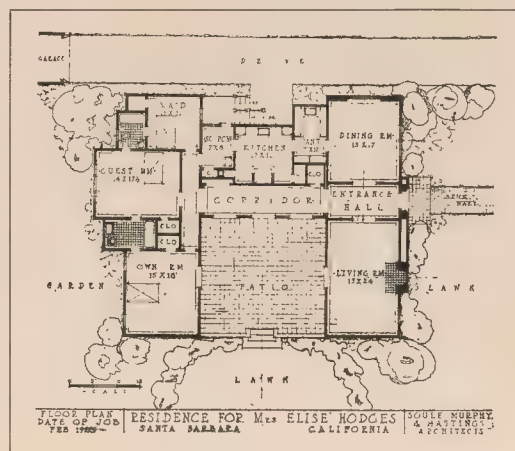
Even in that exception, the well-known residence of Mr. F. L. Baxter (so charming that it received a gold medal award from the Southern California Chapter of the Institute), we find the interior treatment distinctly Spanish in type, and by no means inharmonious with its envelope, French though it be. The simplicity, vigor and picturesqueness of its farmhouse prototype are delightfully reproduced; it must have been fun to build it, and it must be very pleasant to live in.

So much for a digression from type which is surely pardonable from any standpoint. The rest of these buildings vary only in degree. Some are irregular and informal, some carefully balanced, dignified; through all the compositions runs a spirit of robustness, a sturdy substantiality that

marks the work of this firm with a distinct character.

Take their commercial buildings. It is not always easy to convince an owner that a structure intended for business should have any apparent structural stability. To them, the ideal shop is a roof floating over acres of plate glass. Mr. Soule

[Concluded on page 43]



# SANTA BARBARA CONSTRUCTION LESSONS

## III

### DESIGNING AGAINST EARTHQUAKES

[ BY DR. BAILEY WILLIS, STANFORD UNIVERSITY ]

*President Seismological Society of America*



THE Santa Barbara earthquake has called attention to various defects of architectural design as well as to those of structural weakness. The architect may and in certain cases did predetermine the failure of the building in the accepted sketch of the ground plan. (Arlington Hotel.) In other locations he did not recognize the dangerous conditions inherent in an unavoidable plan and did not provide strength to oppose them. (San Marcus building.) By contrast, in certain examples we see that the simplicity of the ground plan and the conditions of construction imposed by the purpose of the structure led directly to a safe type (U. S. Postoffice).

To many it may be a new thought that there exists the possibility of foreseeing how an earthquake will act on a structure. Our efforts to do so will no doubt be advanced by future studies. But even so we can now arrive at suggestions that are not without value. Let us see how far we can get with our present understanding of the origin and nature of earthquake vibrations.

Let ABCD represent a portion of a fault plane underground and let O be a point on that plane from which an earthquake impulse starts in the direction OP. Let EFGH represent the foundation of a structure so situated that the impulse strikes it at the point P. Then the effect on the structure will vary according to the angle at which the elastic impulse of the shock impinges on it. At right angles to the wall the full force of the blow will be experienced. At an oblique angle the effect will be partial, being limited to that of components of the initial force, tending to produce shear or torsion.

A single ray of vibrations is in an actual earthquake only one of an indefinite number, starting from innumerable points on the area of the fault plane, many square miles in extent. Mathematically seismologists distinguish a definite focal center, but we are here dealing with the vibrations that radiate from the fault which acts as a sounding board. Moreover from every point of such a plane the rays diverge in every direction.

The effect is to set the solid rock vibrating according to a very complex system of waves, crossing one another in all directions, canceling one another where crest and

[Continued on page 47]

### EARTHQUAKE-RESISTING FOUNDATIONS

[ BY G. SIACCI, CIVIL ENGINEER, AND EDWARD GLASS, ARCHITECT ]

EDITOR'S NOTE: The authors of the following article, Messrs. G. Siacchi, an Australian Engineer, graduated from the University of Rome, and Edward Glass, Architect, from the University of Pennsylvania, have both had extensive experience with buildings in earthquake countries.

The great bulk of work carried out by Mr. Siacchi, as Consulting Engineer in Egypt, Australia and New Zealand, made him known as an expert in foundations in difficult soil.

Mr. Glass, in association with Mr. Thomas Smith, carried forward as Architects considerable earthquake resisting construction in Guatemala.



THE effect produced by an earthquake is in direct relation with the acceleration of the horizontal movement, which is a movement of short duration, of masses of earth going and coming very rapidly in one main direction. Such directions vary from one moment to another and from place to place according to the geological structure of the soil. In some cases the direction is not quite horizontal, but emerges by a slight angle with the horizon. In such cases there is a vertical component, which, however, is of no importance when compared with the main action of the horizontal movement.

There are sometimes earth upheavals occurring along lines of weak resistance but it is a well-known fact that the undulatory character of the waves is primarily horizontal. An idea of such waves may be had by imagining a basin full of water when shaken. The crests of the water waves may be compared to the upheavals of the earth.

It is generally well-known how the earthquake phenomenon manifests itself. It begins with tremors resulting from distant waves traveling very fast from great depths. The velocity of the vibrations of these waves increases as they come up to the surface.

It is evident that the shocks on a building situated in the seismic area are first received by the foundation, thence transmitted to the building. It follows that the

chances of safety for a building depends, in the first instance, on the resting capacity of the foundation to stand the first and subsequent shocks. It is clear then that foundations should not only be designed to distribute the load upon the ground. They must have also resisting capacities to lateral shocks. Better than resisting, they should be able to *absorb* shocks. In fact, if shocks could be absorbed like in automobiles, buildings would be totally immune from earthquake disturbances.

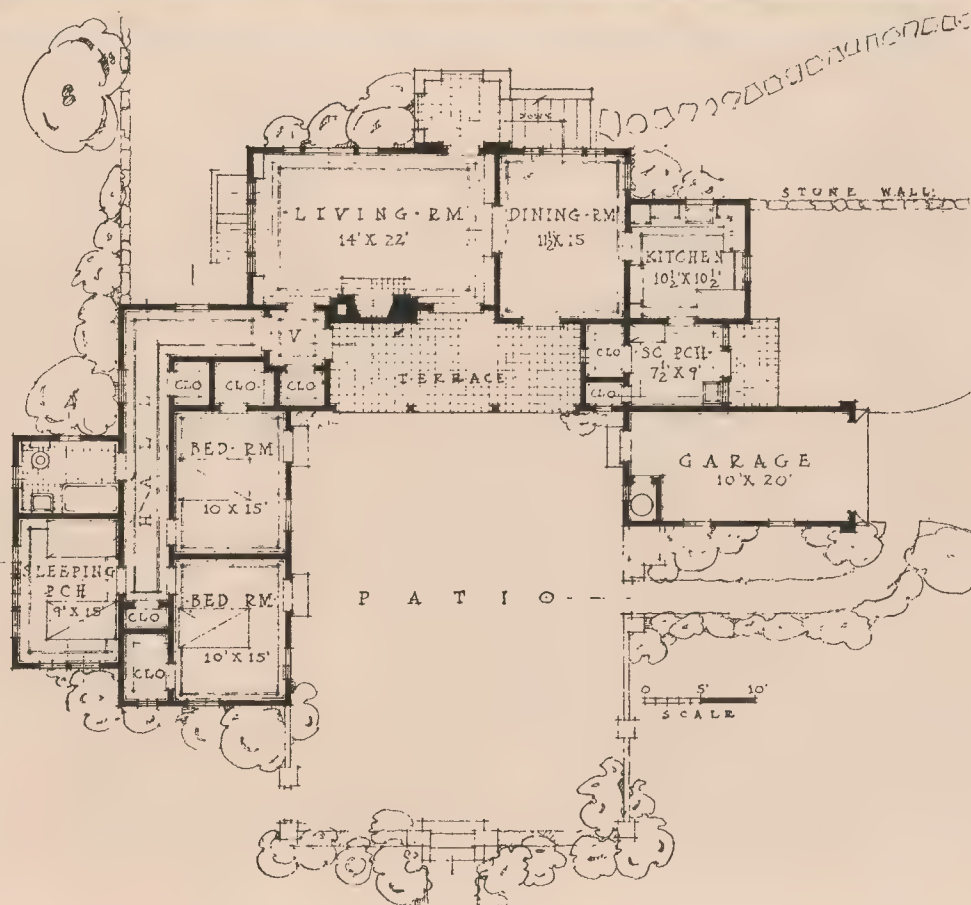
The kind of foundation we have imagined that would, in our opinion, answer the above requirements is a *raft of reinforced concrete*. Its structure would be like that of a multiple and geometrical honeycomb with upright truncated cylindrical cells from 3 to 6 feet in diameter and from 3 to 9 feet high, measured outside the two horizontal slabs. These slabs are to be reinforced with wire nets placed in two directions. Their thickness would vary according to the upward and downward pressures. The shell of each cell or ribs of the structure would be 8 inches thick at the base and 4 inches at the top. Their reinforcement would be both vertical and spiral.

The cavity would be filled with sand graded in such a manner as to reduce the voids in the sand to a practically irreducible minimum.

We claim that this type of structure will realize not only great economical advantages as a footing for build-

[Concluded on page 46]





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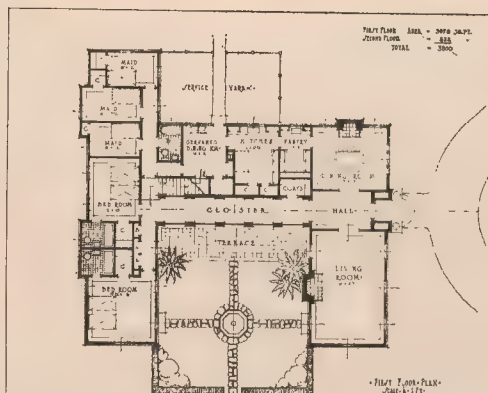
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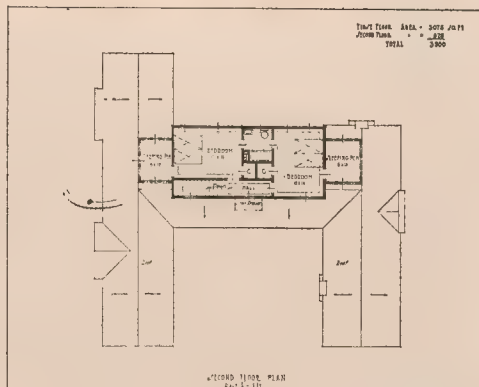
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*The school shown is roofed with Latin Tile  
The architectural detail is in Terra Cotta*

\* \* \*

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THE ROOF of the new Science building, University of Southern California, showing the Red Granada Roofing Tile, random laid with 'laced' valleys.

*Arthur Harris, Roofing Contractor  
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Architects*

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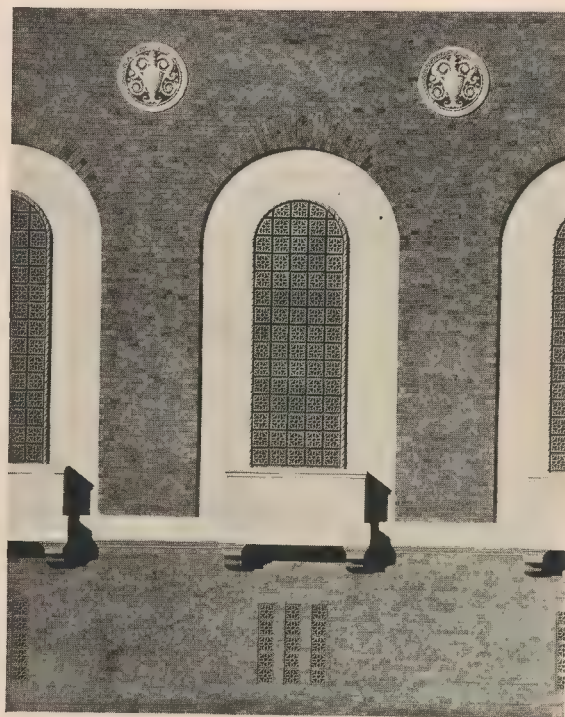
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*Detail Brick Wall,  
Senator Theatre,  
Sacramento*

*Leonard F. Starks,  
Architect*

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## This Brick ruffled on broad side

Architect Leonard Starks economized in the face brick veneer laid over the concrete of the Senator Theatre, Sacramento, by having the brick laid up with the broad side exposed.

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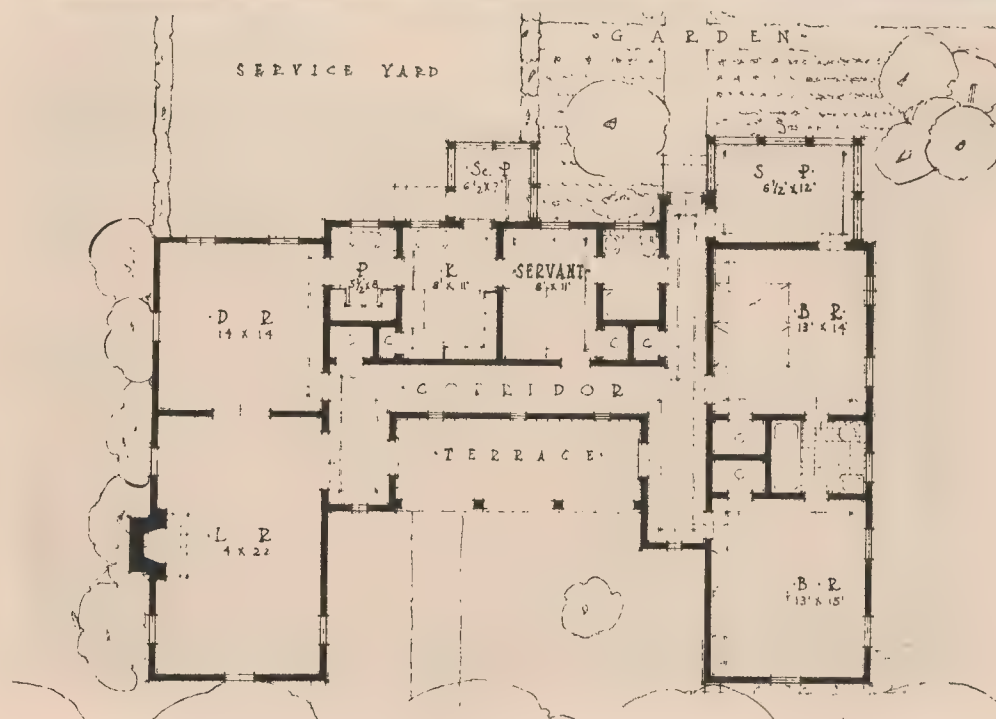


RESIDENCE OF MR. F. L. BAXTER, SANTA BARBARA, CALIFORNIA. SOULE, MURPHY AND HASTINGS, ARCHITECTS



RESIDENCE OF MR. F. L. BAXTER, SANTA BARBARA, CALIFORNIA  
SOULE, MURPHY AND HASTINGS, ARCHITECTS





RESIDENCE OF MR. KENDALL ROGERS, SANTA BARBARA, CALIFORNIA  
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*The Furniture Mart, Chicago, Illinois  
Henry Raeder, Architect, N. Max Dunning and George C. Nimmons & Co., Associates*

THE Furniture Mart is one of the outstanding buildings that are extending the commercial section of Chicago "north of the River."

The exterior walls are of a warm gray, textured face brick, laid in a flush cut natural mortar, with the horizontal joints one-half inch wide and the vertical joints slightly less. The trim and ornamental features are of a slightly lighter gray Mat Glazed Terra Cotta with quite a strong mottled and texture treatment, thus producing a most pleasing and effective color harmony.

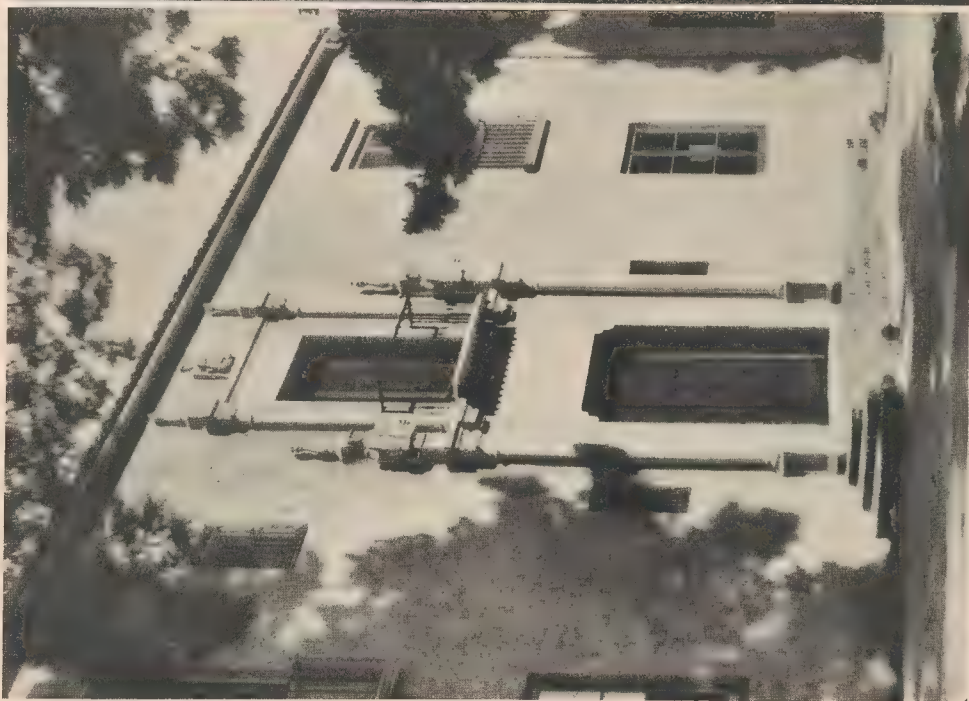
You will find many splendid examples of the modern use of face brick in "Architectural Detail in Brickwork," a portfolio of many halftone plates, showing various treatments of the brick wall surface, ready for filing. It will be sent postpaid to any architect making request on his office stationery.

"English Precedent for Modern Brickwork," a 100-page book, beautifully illustrated with halftones and measured drawings of Tudor and Georgian types and American adaptations, sent postpaid for two dollars.

## AMERICAN FACE BRICK ASSOCIATION

1767 Peoples Life Building • Chicago, Illinois





LEFT—UNIVERSITY CLUB; RIGHT—BEACH LODGE FOR MR. BERNHARD HOFFMAN, SANTA BARBARA, CALIFORNIA. SOULE, MURPHY AND HASTINGS, ARCHITECTS

**FIRE DESTROYS GOLD RIDGE HATCHERY**  
 FIRE DESTROYS SEVERAL HOMES  
 FOUR FRAME BUILDINGS, RESTAURANT AND SERVICE STATION BURNED  
 FIRE PERISH AS HOME BURNS  
 FIRE THREATENS STORE BUILDINGS  
 BRICK REPLACING WOOD  
 Increasing Population and Depletion of Forests Brings Better Demand  
 Rubbish Bonfire Causes \$10,000 Property Loss  
 LAUDS HOMES IN SOUTHLAND  
 Architect Back from Trip to Europe  
 Declares Better Types are Found Here  
 Embodies Best Features of Foreign Design  
 WATCHMAN BURNED IN \$50,000 FIRE  
 Five Companies Fight for Hours in Effort to Quell Home Gardens Blaze  
 FIRE RAZES TWO WAIKENA STORES; LOSS IS \$20,000  
 Tulare County Town Unable To Halt Flames Due To Lack of Equipment  
 FIRE RAZES INN NORTH OF TOWN  
 Spectacular Night Blaze Destroys Place at Highway Corner  
 Early Morning Fire Destroys Landmark in Waco Business Section  
 FIRE RAZES HOUSE IN REDWOOD CITY; NO ONE IS INJURED  
 OLD SCHRADER HOME PREY OF FIRE YESTERDAY  
 Blaze of Undetermined Origin Wrecked Property of Luis Obispo \$3500  
 TWO HOMES BURN IN SAN JOSE  
 Defective Cauter Cause

# Fires

that could have been prevented

EVERY time the clock ticks 60 seconds \$1000 is lost in this country by preventable fires—enough to pay the French war debt in eight years—more than enough to pay the annual salaries of all the school teachers in America.

And the frightful thing about these fire losses is that they are absolutely preventable. Buildings burn only when they are built of combustible materials. We like to blame high winds, careless smokers and rats gnawing matches under floors—but we continue to pile up fuel for the flames when we rebuild.

We are the only civilized country in the world that has still to learn that fireproof construction is the only economical safe construction. Brick has driven the Demon Fire out of Europe. Gradually brick is teaching California that the only way to avoid fires is to build against them. Brick is burned in the making—it never can burn again.

CALIFORNIA COMMON BRICK MANUFACTURERS ASSOCIATION

Los Angeles San Francisco

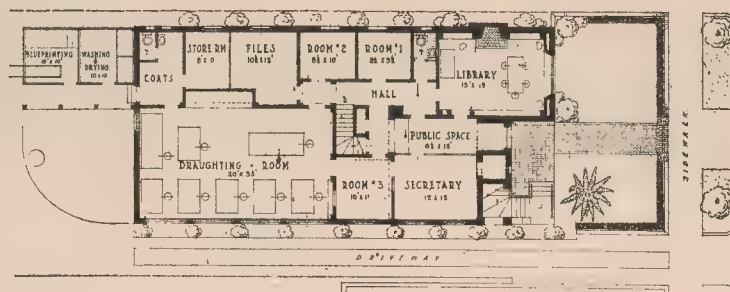
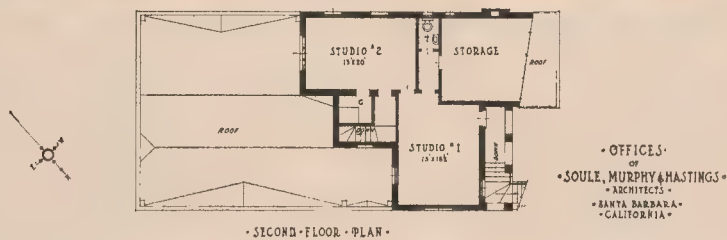
# BRICK

FOR FIREPROOF BUILDING





OFFICES OF SOULE, MURPHY AND HASTINGS, ARCHITECTS, SANTA BARBARA, CALIFORNIA

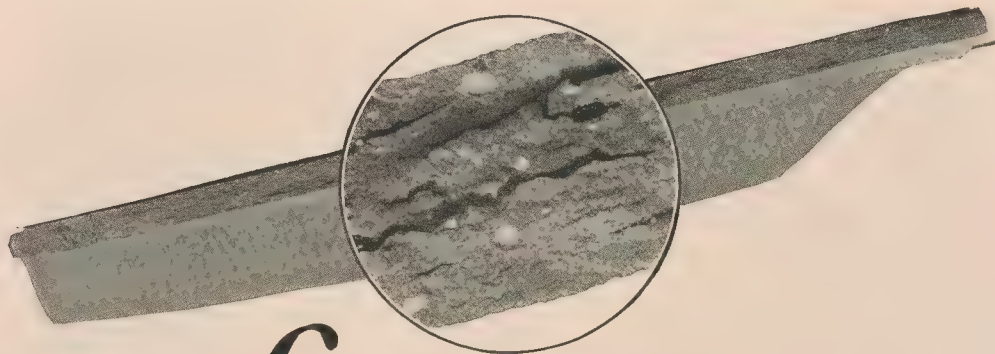


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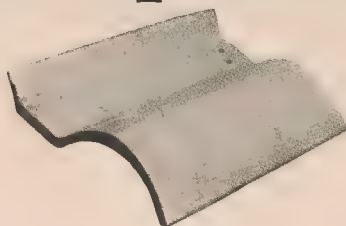
## *Laminations* -the sign of inferior tile

AT a superficial glance all roofing tile may look pretty much alike. But there are vital differences that do not always show on the surface. It is necessary to break a tile and see how it is made in order to judge its true worth as a roofing material.

Laminations are caused by defective manufacture in which the center of the plastic clay column moves faster than the sides. This gives a finished product built up of layers with pockets and air spaces between, giving a ware inherently weak and porous.

We guarantee each and every tile of our manufacture to be free from laminations and blisters.

## Simons Spanish Tile



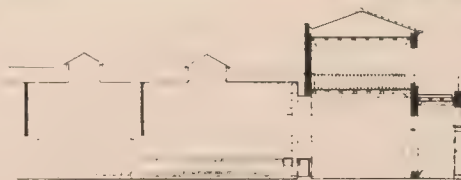
SIMONS BRICK COMPANY · LOS ANGELES · WALTER R. SIMONS, PRES. AND GENL. MGR.





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SANTA BARBARA, CALIFORNIA

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ARCHITECTS



SECTION



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THE F. P. KNOTT STORES, SANTA BARBARA, CALIFORNIA. SOULE, MURPHY AND HASTINGS, ARCHITECTS

## Colors of France



*Pierpont & Walter S. Davis, Architects, are the creators of this delightful bit of French architecture. The French Village, at Calhenga and Highland Avenues, is finished in California Stucco.*

CALIFORNIA STUCCO is consistently first and final choice where variety and permanency of coloring are important. A twentieth century renaissance in the architecture of all nations is possible with California Stucco. It gives designer and contractor alike a new confidence in stucco construction and positive control over the elements, for California Stucco *endures*. There is no stucco more universally used by the leaders in the building world. California Stucco is the by-word for first grade stucco construction from coast to coast. Month by month stucco yardage is increased—the demand for stucco grows—largely due to our development work in the interests of plasterers who use California Stucco. Our laboratories are continually striving for new textures and tints while California Stucco applied years ago continues to build confidence in its performance in every type of construction. This is in-built quality that cannot be sacrificed by a single bag of inferior product. Each bag of California Stucco is perfect stucco insurance. Eliminate guesswork in stucco results and build forever with California Stucco.

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Company  
1013 James Bldg.





ROOSEVELT SCHOOL, SANTA BARBARA, CALIFORNIA. SOULE, MURPHY AND HASTINGS, ARCHITECTS



Ultimate seating capacity of the Stadium, 75,000. South end, as shown in photograph of working model, is planned as the site of a memorial to the Chicago men who lost their lives in the World War.

Architects: Holabird & Roche, Chicago. Engineer: Lynn J. White, of the South Park Commissioners, Chicago. Contractors: Blome-Sinek Construction Co., Chicago.

Cut cast stone supplied by: Benedict Stone Corporation, New York, Chicago, Montreal.

## Ancient Greece in Modern Concrete

To those who still believe that the architectural beauty of the ancients can be expressed only in traditional materials, Grant Park Stadium, Chicago, will be a revelation.

This monumental structure takes you back to "the glory that was Greece." And it is done entirely in concrete. This includes the columns and other exterior architectural details, all of which are of cut cast stone. Thus beauty, as well as construction, is made permanent.

Grant Park Stadium is only one of a great variety of structures that impressively demonstrate the wide range of adaptability concrete offers to the architect—a range not within the possibilities of any other material.

\* \* \*

If you are interested in receiving additional data on concrete in stadium construction, address the nearest office listed below. Ask for leaflets S-112 and S-104.

### PORTLAND CEMENT ASSOCIATION

*A National Organization to Improve and Extend the Uses of Concrete*

ATLANTA	BOSTON	COLUMBUS	DETROIT	LOS ANGELES	NEW ORLEANS	PHILADELPHIA	SAN FRANCISCO
BIRMINGHAM	CHARLOTTE, N. C.	DALLAS	INDIANAPOLIS	MILWAUKEE	NEW YORK	PITTSBURGH	SEATTLE
	CHICAGO	DENVER	JACKSONVILLE	MINNEAPOLIS	OKLAHOMA CITY	PORTLAND, OREG.	ST. LOUIS
		DES MOINES	KANSAS CITY	NASHVILLE	PARKERSBURG	SALT LAKE CITY	VANCOUVER, B. C.
							WASHINGTON, D. C.

*Our Booklets are sent free in the United States, Canada and Cuba only*



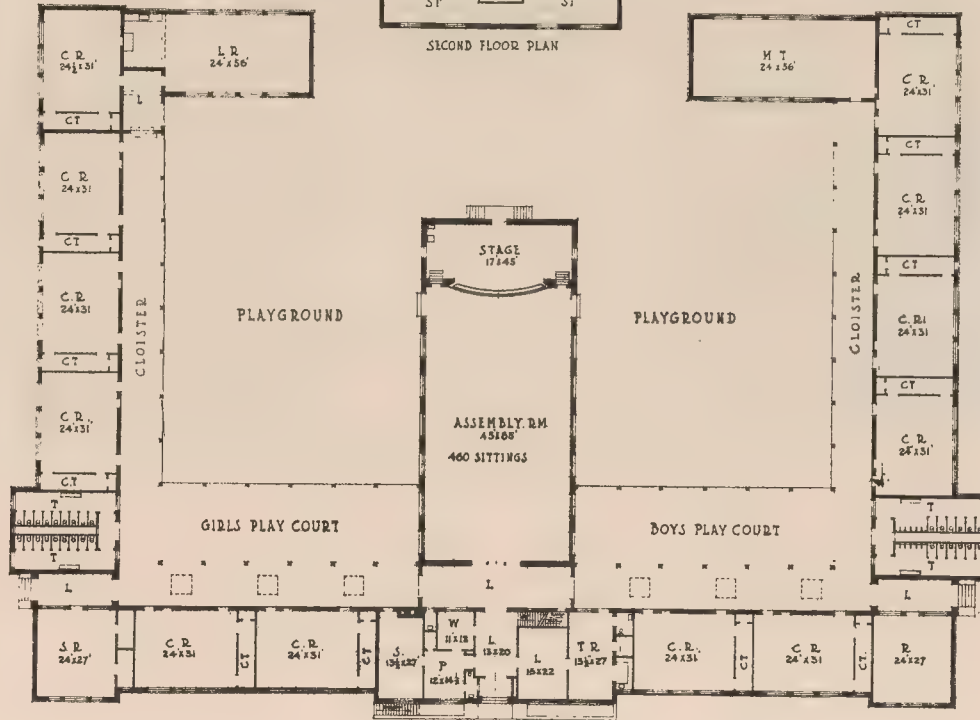


- KEY TO ROOMS •  
 L.R. = LUNCH ROOM.  
 C.R. = CLASS ROOM.  
 C.T. = COAT ROOM.  
 C. = CLOSET.  
 T. = TOILETS.  
 S.R. = SEWING ROOM.  
 L. = LOBBY.  
 S. = SUPPLIES.  
 P. = PRINCIPAL'S ROOM.



SECOND FLOOR PLAN

- W. = WAITING ROOM.  
 T.R. = TEACHERS ROOM.  
 L.D. = LIBRARY.  
 D. = RECITATION ROOM.  
 M.T. = MANUAL TRAINING.  
 N. = NURSE.  
 N.R. = NURSES WAITING ROOM.  
 D. = DENTIST.  
 S.T. = STORAGE.  
 P.J. = PROJECTION BOOTH.



FRANKLIN SCHOOL, SANTA BARBARA, CALIFORNIA. SOULE, MURPHY AND HASTINGS, ARCHITECTS



PACIFIC GAS & ELECTRIC BUILDING  
SAN FRANCISCO  
BAKEWELL & BROWN ARCHITECTS



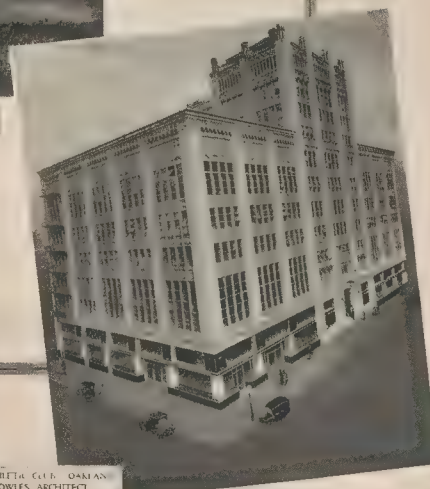
MERCHANTS BUILDING  
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GEORGE W. KLEIN, ARCHITECT  
J. C. HUNT, ASSOCIATE ARCHITECTS



OLYMPIC GOLF AND COUNTRY CLUB SAN FRANCISCO  
BAKEWELL & BROWN AND JOHN BAKER ARCHITECTS



PACIFIC TELEPHONE AND TELEGRAPH COMPANY BUSINESS OFFICES  
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BLISS & FLETCHER ARCHITECTS



ATHENS ATHLETIC CLUB OAKLAND  
WM. KNOWLES ARCHITECT

## Perma-Light Wall Finishes

WERE USED THROUGHOUT in all the above architectural landmarks recently erected, with the exception of eight floors in the Pacific Gas and Electric Company's Building (which were divided among several other makes).

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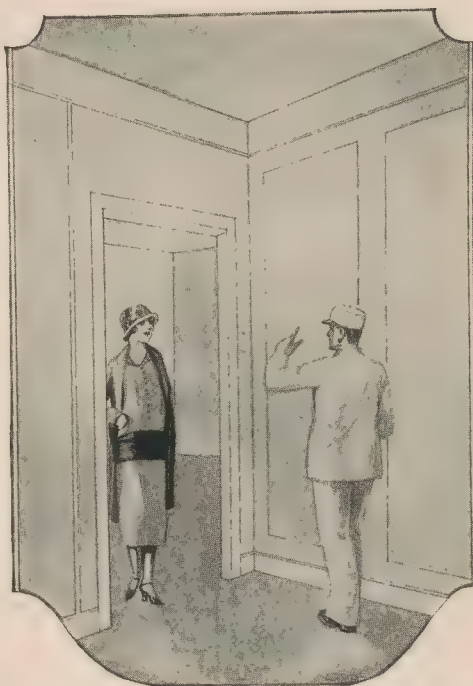
# BUTTRESS PLASTER LATH

*Makes Walls and Ceilings  
of Enduring Charm*

To be sure of securing walls and ceilings which, by their flawless beauty and charm, emphasize the perfection of a home, it is necessary to have the plastering done over a strong base which will not absorb moisture, swell, crack, or buckle.

The appearance of the finished interior depends largely on the skill of the plasterer. Therefore he should not be handicapped by a poor base to work on.

Buttress Plaster Lath is made of gypsum rock plaster, compressed for strength between two sheets of tough paper. This strong "solid" lath provides an ideal plastering base and assures walls and ceilings that are insulators against heat and cold, practically sound-proof, and 100 per cent more fire-resistive than wood lath and plaster construction.



## Prevents Unsightly Cracks and Broken Plaster

Because it is "cured" in the manufacturing process, Buttress Plaster Lath does not buckle nor shrink after being applied. Its use, therefore, prevents the appearance of ugly plaster cracks in the walls, ceilings and corners. Nor will plaster applied to this material leave a spotted surface, even in the driest weather. Specify it on your next job and note the beauty of the finished work.

SOLD BY ALL BUILDING MATERIAL DEALERS

*Write for Free Sample and Descriptive Circular  
About Buttress Plaster Lath*



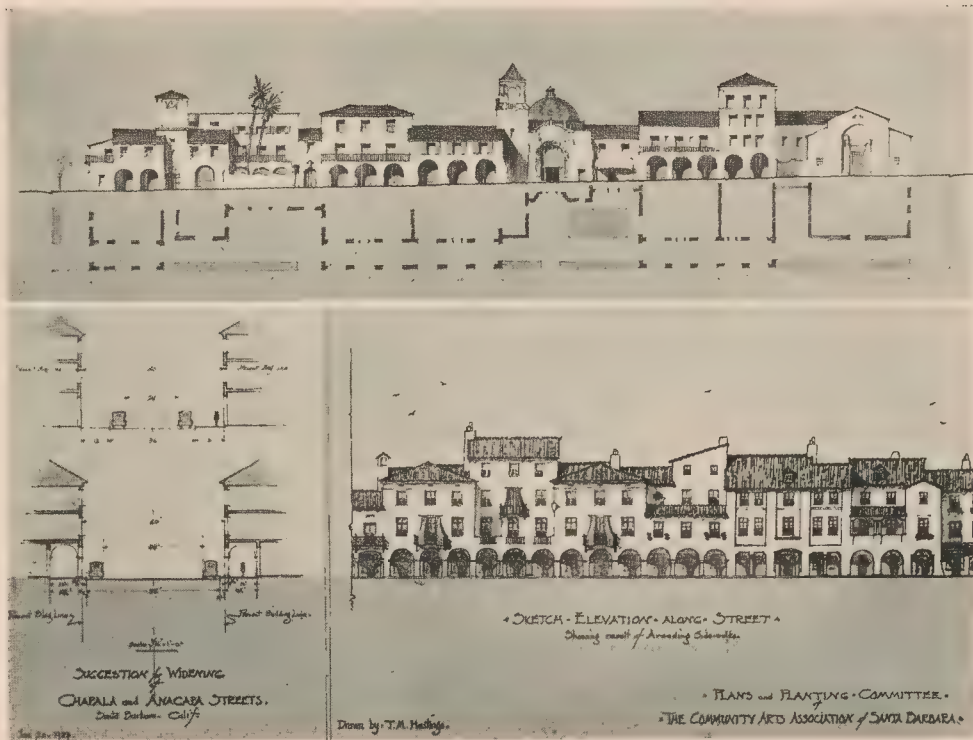
## Buttress Manufacturing Co.

7110 South Alameda Street

Los Angeles

California





STUDIES FOR TREATMENT OF SANTA BARBARA STREETS. PLANS AND PLANTING COMMITTEE

# california PINE

California White Pine<sup>®</sup>  
(trade name)

California Sugar Pine<sup>®</sup>

## Sidings that look well and "stay put"

THE HOUSE with California Pine siding stands as a permanent display of the architect's good judgment.

Siding of California Pine, not only looks well to start with, but *holds* its shape, lays flat without warping or end-shrinking, twisting or splitting. That is because of the remarkable cellular construction of California Pine, and its susceptibility to perfect seasoning.

Builders and carpenters, likewise welcome the specification of California Pine siding. The builder, because this siding is obtainable in all the various forms, of standard widths and lengths—the carpenter, because California Pine siding is so easy to cut, fit and nail securely to the sheathing. All of which makes for good workmanship without waste of time.

Then, as to painting—this light-colored, soft pine is easy to paint. The brush



Carpenters like California Pine siding because it's easy to cut and fit, and makes for good workmanship.



Cork-like texture holds nails tightly and prevents splitting even with nails driven close to edge or end.



Paint flows evenly and spreads smoothly on California Pine. It *holds* paint well and the coat stays smooth.

moves along readily while the paint flows evenly and spreads smoothly. California Pine holds paint—the coat *stays* smooth, because of freedom from pitch and grain-raising tendencies.

If you have not received a set of our Information Sheets on California Pine, let us send them to you. You are also invited to correspond with our Wood Technologist, formerly with the U.S. Government Forest Products Laboratory, at Madison, Wisconsin, and now connected with this association.

### California White and Sugar Pine Manufacturers Association

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# EDITORIAL

## *What Price Advertising Glory?*

**S**PEAKING to a business club recently, the representative of a large advertising agency stated that out of one billion dollars spent this year in advertising, half would be wasted.

That wasted wealth about equals our annual fire loss. It is of too much consequence to be forgotten—to be ridiculed—to be condoned. What proportion of it goes into casual, spasmodic "special editions" in connection with the building industry which serve no purpose but to flatter someone's vanity and which hardly ever succeed in that, since they are seldom well done, can only be guessed at.

Such an amount put back into the factories for the improvement of conditions and service and quality, or put into intelligent and truthful spread of real information to consumers, would be of incalculable benefit to the country.

Hopeless as individual protest or action may seem, it is an obvious obligation, and must have a cumulative effect. As far as this journal is concerned, this is our creed; we believe:

That an advertisement should be truthful.

That it should give or offer definite, accurate information concerning:

1. What the article or service is.
2. How it is used or performed.
3. Where it has been used or performed.
4. Scientific or official data as to merit.
5. Latest improvements or devices.

That it should be attractive in appearance, concise and easily read.

That a journal should not knowingly publish the advertisement of any firm or person unworthy of patronage.

On the receiving end of the message, we may add, we believe the reader should appreciate the effort made to assist him to an intelligent choice of materials and workmanship, and should co-operate by approval or criticism. Constructive comments are very welcome.

\* \* \*

## *The Architect and the Earthquake*

**D**R. BAILEY WILLIS of Stanford University, president of the Seismological Society of America, has been jocularly called a "wizard" because he managed to be "present in person" when the earthquake visited Santa Barbara last June. However that may be, it was a fortunate circumstance that this thoughtful scientist should be on the ground to add first-hand observations to the years he has devoted to a study of seis-

mic disturbances. And it is fortunate, too, that Dr. Willis is not only a profound student but has the ability and the will to express himself clearly. We believe that every architect will find the article by Dr. Willis, "Designing Against Earthquakes," in this issue of real value. For our part, we feel complimented, indeed, that this distinguished scientist should choose the PACIFIC COAST ARCHITECT as the medium in which to convey his thoughtful paper to the profession.

\* \* \*

## *A European Pilgrimage*

**A**RCHITECTS and appreciative laymen—not such rare birds as some architects think—will be interested in the tour to be conducted by Albert Kelsey, F. A. I. A. The record of Mr. Kelsey as an architect and educator, his service to the Institute, his personal charm, have made him well known to the profession. The manner in which he proposes to lead this pilgrimage is unique and stimulating to the imagination.

"To revive the lost art of conversation, by conducting a series of causeries suggested by what we are to see . . . I must make the old familiar 'high spots' more interesting than they have ever been before. After that I can conduct to new and unfamiliar places in a spirit of adventure. . . . A leisurely, dilettanté tour for those interested in the rare, the precious and the beautiful; and especially for those who will delight in taking part in good conversation amid inspiring surroundings."

Starting from New York, February 25, North Africa, Sicily, Italy and France will be visited, reaching New York again May 25. All arrangements will be made by the Temple Tours offices.

\* \* \*

## *Opinions Are Welcomed*

**A**MONG letters we received in connection with the series of "Construction Lessons from Santa Barbara" was one from Mr. Edward Glass, an architect of high standing in San Francisco, in which he expressed some divergence from the opinions of one of our contributors. An answer was sent, telling him that if he cared to put his ideas into form for publication, we should be glad to give them space. The pages of this journal are open to any discussion tending to the good of the profession and to the improvement of building construction. The article giving his views was prepared by Mr. Glass, is printed in this issue and will be found well worth serious consideration.



Ask the nearest building material dealer for Booklet on Plastite, also complete plans and specifications for swimming pools and reservoirs.

## "Let it rain—let it pour!"

THE Plastite house is waterproof. No gale can drive the water through its dense, hard walls. Neither cold nor heat can affect it. Once put in place, Plastite is *there to stay!* The wall is in reality a slab of watertite, reinforced concrete.

Plastite protects permanently—because it grows harder, stronger, more watertite, as the years go on. Plastite meets favor with plasterers because it mixes and trowels so easily, and cures firm and uniformly, without "craze" cracks.

Architects may specify Plastite with the certain knowledge that its use means complete satisfaction to the owner.

*Our illustrated magazine, "PLASTITE PROGRESS," will be sent on request.*

**RIVERSIDE PORTLAND CEMENT CO.**

724 So. SPRING STREET LOS ANGELES TRINITY 5951



# SAN FRANCISCO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS MONTHLY BULLETIN

## OFFICERS

JOHN REID, JR., President  
HARRIS ALLEN, Vice-President  
ALBERT J. EVERS, Sec.-Treas.



## DIRECTORS

J. S. FAIRWEATHER, three years  
W. C. HAYS, three years  
EARLE B. BERTZ, two years  
WILL G. CORLETT, two years  
GEORGE W. KELHAM, one year  
ARTHUR BROWN, one year

## NEXT MEETING

The next meeting will be held on Tuesday, November 17, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell street, at 6:30 p. m. Dinner will be served at 75 cents per plate.

## OCTOBER MEETING

The Annual Meeting of The American Institute of Architects San Francisco Chapter was held on Tuesday evening, October 20, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell Street. The meeting was called to order at 7:45 by President Fairweather.

The following members were present:

Harris C. Allen, Chas. F. Maury, Morris M. Bruce, Jas. H. Mitchell, Sylvain Schnaittacher, Ernest Coxhead, Louis C. Mullgardt, Lewis P. Hobart, P. J. Herold, Rudolph Herold, G. F. Ashley, S. L. Hyman, Earle B. Bertz, W. C. Hays, E. H. Hildebrand, J. S. Fairweather, J. Reid, Jr., A. J. Evers.

## REPORTS OF OFFICERS

President Fairweather read his report for the year. Moved, seconded and carried that the report be received and placed on file.

Report of the Secretary-Treasurer was read by the Secretary. Report of the Board of Directors, Education Fund, was read by the Secretary. Moved, seconded and carried that these reports be received and placed on file.

## REPORTS OF STANDING COMMITTEES

Chairman Harris C. Allen reported for the Committee on Architectural Relations and Publicity.

Chairman S. Schnaittacher reported for the Committee on Competitions.

Chairman Coxhead reported progress for the Committee on Plan of Washington and Environs.

No reports were received from the following:

Committee on Regulations, Laws and Building Report; Committee on Historic Monuments; Committee on War Memorials; Committee on Education and Small Houses; Committee on Membership.

## REPORT OF SPECIAL COMMITTEE

Chairman John Reid, Jr., reported for the Committee on Industrial Relations.

## NOMINATION FOR HONORARY MEMBER

Letter from Otto Kleemann, stating that he is retiring from practice was read by the Secretary. Moved, seconded and carried that Otto Kleemann be made an Honorary Member of the Chapter without further payment of dues after the current year.

## ELECTION OF OFFICERS

The candidates of the Nominating Committee were read by the President, as follows: President, John Reid, Jr.; Vice-President, Harris C. Allen; Secretary and Treasurer, Albert J. Evers. Directors: J. S. Fairweather, three years; W. C. Hays, three years.

Moved, seconded and carried that the Secretary cast the ballot.

(Directors Earle B. Bertz, Will C. Corlett, George W. Kelham and Arthur Brown are serving unexpired terms.)

## NEW BUSINESS

President Fairweather turned the chair over to President-elect John Reid, Jr.

Moved, seconded and carried that the retiring officers be tendered a vote of thanks for their untiring efforts during the past year.

A communication from Pittsburgh Chapter, regarding the jail designed by H. H. Richardson, was read to the Chapter. Moved, seconded and carried that the Board of Directors communicate with the proper authorities asking that the problem be studied with the idea of saving Richardson's work.

Letter from the Builders Exchange, regarding adding percentage to bids for distribution, was read. Moved, seconded and carried that it is the sense of the Chapter that it would be inadvisable and impracticable to add a percentage as requested, and that the matter be referred to the Industrial Relations Committee for reply.

A letter from the Builders Exchange regarding the segregation of lathing from plastering in the specifications, was read. Moved, seconded and carried that it be reported as the sense of the meeting that this segregation is a matter of choice varying with the type of the work.

The subject of the visit of the Board of Directors of the Institute was brought up by Regional Director Schnaittacher. A letter from President Waid was read by Mr. Schnaittacher.

The meeting passed a vote of thanks to Gladding, McBean & Co. for keeping the sketches and photographs of Mr. Jesse Stanton on exhibition for the meeting.

Mr. Hildebrand reported the serious illness of August Headman. Secretary was instructed to write to Mr. Headman with Chapter good wishes.

There being no further business, the meeting adjourned.

Respectfully submitted,

ALBERT J. EVERS, Secretary

\* \* \*

## NATIONAL A. I. A. OFFICERS COMING

A visit of unusual importance to the architectural profession on the Pacific Coast will be made early next month. The national officers and directors of the American Institute of Architects will visit the Coast, reaching San Francisco December 8th. They will remain in San Francisco two days and plans for their entertainment include motor trips and an informal dinner at the Bohemian Club to which all architects of the vicinity will be invited. This is a rare occurrence and will afford opportunity to meet many of the national leaders of the profession.

# Another Endorsement!



## Long Beach Tests Prove Bishopric Base 241% Stronger Than Sheathing!

UP and down the Pacific Coast official city tests are proving that Bishopric Base makes walls twice as strong as 1-inch sheathing. In San Francisco, Bishopric Base is the only patented wall backing permitted. In Long Beach the city testing board found it 241 per cent stronger than ordinary lumber sheathing. Many other California cities are adopting this new, better way to build stronger walls.

And in the East, Bishopric Base has been a leader for 18 years in all big cities!

Remarkable strength is only *one* virtue of Bishopric Base. The dovetailed interlocking key—the strongest mechanical

key known to science—locks stucco or plaster to the wall, preventing cracking, buckling or sagging. Asphalt mastic, which cements the doubly-beveled lath to the fibre board, renders this Base proof against wind, rain, heat, cold and vermin.

And yet, Bishopric Base actually costs *less* in most cities!

We have prepared a complete Data File and working sample which will help you in drawing up plans and specifications. Request them by letter or telephone and they will be mailed at once. Bishopric Mfg. Co. of California, 604-626 E. 62nd St., Los Angeles. AXridge 9108.

# Bishopric Base

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HOW

IT

LOCKS

THE

CEMENT

For best results, we recommend 18 gauge wire netting to reinforce the cement.



## TECHNICAL BUILDING QUESTIONS ANSWERED

[BY PAUL W. PENLAND]

*Research Engineer, Blue Diamond Company, Los Angeles*

A RESEARCH DEPARTMENT FOR THE CONVENIENCE OF READERS OF THE PACIFIC COAST ARCHITECT. ALL INQUIRIES ARE WELCOME.

**Q.** Who pays the compensation insurance on a building?

**A.** The Contractor pays the compensation insurance on a building by taking out a policy or assuming full liability. However, there are cases where the owner takes out a policy and this relieves the contractor of further liability.

**Q.** Is compensation insurance part of the cost?

**A.** Yes, the contractor charges compensation insurance to the cost of each individual job.

**Q.** Is it necessary to put a preservative on Cedar shingles?

**A.** No, the lasting qualities of Cedar shingles are second only to Cypress; however, the life of shingles may be prolonged by dipping them in linseed oil or creosote.

**Q.** What is the status of a lien filed against a property on which there are already a mortgage and trust deed?

**A.** If lien is filed before recording of mortgage and trust deed, the lien shall take preference. If mortgage and trust deed are recorded before filing of lien, they shall take preference.

**Q.** Does the California Housing Law require a rear yard for one-family dwelling?

**A.** No, unless the building is so designed that the rear yard is required to serve as a light court for one or more living or sleeping rooms.

**Q.** I am building a home of seven rooms and know a contractor who will not charge me for the plans. I intend to inspect the job regularly to see that he fills the contract. Will I get the desired results to obtain a livable home for my family or should I employ an architect?

**A.** The value, from start to finish, of an intelligent and conscientious control of the multitude of details, by a competent architect should be given the greatest consideration in the building of your home. To produce a

home, no matter how small, of charm and character, one that is planned economically and conveniently, requires great skill and much experience. In addition, the plans and specifications should be figured in a competitive way by reliable contractors and the architect should be retained for supervision.

**Q.** My basement concrete floor has cracked in one spot and the finish is coming off. What is the best way to repair it?

**A.** Thoroughly scrub and clean the spot after all loose particles are removed. If the base is not jagged, roughen it. Soak the surface, but leave no film of water. Select, for patching material aggregate, the same as the original floor and mix the same proportions as originally used. Apply with pressure to obtain a good bond. Then do not disturb until the patch has hardened. While curing, cover with a 3-inch layer of wet sand.

**Q.** Are small knots a detriment to lumber for framing a house?

**A.** Small knots are not objectionable if they are sound. If the knots are large, the strength of the timber is very much reduced, and, if loose or dark in color, they will ultimately fall out, loose knots being the stubs of dead branches.

**Q.** How should a closet be lighted?

**A.** Closets should be provided with an outlet directly over the door in a horizontal position or vertically against the ceiling. It should never be placed in a position such that inflammable material may be placed against it. This lamp may conveniently be controlled by a door switch which throws on and off the current as the door is opened and closed. It is always advisable, however, to equip the lamp with a pull chain socket in order that the lamp may be turned off in case the door is to be kept open any length of time.

### THE JEWEL OF ARCHITECTURAL CONSISTENCY

[Continued from page 5]

and his associates have been able to convince many practical investors that a building may show the solid substance of its construction and still be so attractive in design as to constitute a business asset. This is not only a feather in their own caps, but a big help to their professional brothers and, indeed, to the community. When it is added that these buildings are as strongly built as they look, and went through the recent earthquake with no damage worth mentioning, it is evident that virtue has been rewarded, and will doubtless reap further rewards in good season.

Among the residences here shown, the smaller ones are the more attractive. Why is this so often the case? Architects are always bemoaning the limitations of expense, and picturing the beauty possible to an open purse; and then the cottage turns out a veritable gem, while the mansion is cold and lacks "character"! I must not be interpreted, however, as criticizing such houses as those for Mr. Spaulding and Mr. Hodges, for they do have character, and very respectable it is; there is nothing either too thin or too heavy; they are dignified and well proportioned; however, I like the smaller houses better.

One building in a class quite by itself must not be overlooked, in which are housed the firm's own offices. It is even happier than the pictures indicate, for it is impossible to get a photograph from the angle of the sketch. The trees, which interfere with the camera, serve to make the effect all the better to the eye. Inspired by the picturesque homes of tillers of the soil in Romance lands, it serves well as quarters for the designers of homes and gardens.

A ticket office for the Santa Fe Railway is worth mention for the success with which the idea of attractive service to the public has been expressed.

It is fortunate that in this period of vital concern to Santa Barbara the young men who compose this firm should be in the full tide of their professional activity.

\* \* \*  
August G. Headman, a well-known architect of San Francisco and the founder of the San Francisco Architectural Club, succumbed to a long illness October 28. He was only 42 years old and his untimely passing is keenly regretted by his many friends in California.

\* \* \*  
L. J. Hendy, 1060 Bush Street, San Francisco, wishes to receive manufacturers' catalogues of all kinds and is particularly interested in those pertaining to garages, pumps and light machinery.



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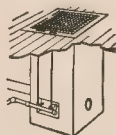
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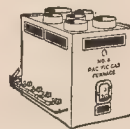
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Furnished in any desired finish. An air duct supplies a continuous stream of fresh air to the flame. Outer casing is always cool.



# MODERN HEATING AND VENTILATING PROBLEMS

## II

### INSTANTANEOUS AND STORAGE WATER HEATERS

[ BY THOMAS B. HUNTER ]

*Hunter & Hudson, Consulting Engineers*

AUTHOR'S NOTE.—This is the second of a series of informative articles regarding the selection and installation of modern types of cooking, water-heating and space-heating equipment. The third will appear in the December issue.



**A**MONG practical men concerned with actual installations of instantaneous, automatic or automatic storage gas water heaters, it seems to be agreed that the flue or vent is of the utmost importance. Yet these same men will tell you that engineers and architects, in designing new buildings, frequently fail to provide proper sized flues or neglect to carry the connection from heater to flue at a proper angle.

Where much of the misunderstanding of flue requirements arises is in the fact that many seem to regard the flue as a mere vent to carry away the fumes. This is not its only function. It takes air to make fire burn and it is necessary, therefore, for the flue to be large enough to create sufficient draft to draw thru the heater the required supply of air. But it is also necessary that the top of the flue be carried high enough above the roof—at least two feet above the highest point of the roof—and provided with some form of top to prevent down draft.

What is the minimum flue area for the instantaneous automatic type of gas water heater? In every case it should be at least six inches in diameter, except for the small 2-gallon and 2½-gallon per minute heaters where a flue five inches in diameter is permissible. But for the popular 3-gallon and 4-gallon types, a six-inch flue is required. For a 6-gallon per minute heater, the flue should be not less than seven inches, and for an 8-gallon heater at least eight inches.

It is, of course, a dangerous practice to carry the vent from the water heater into the same outlet as that used by a coal stove or furnace, or a gas range, with the built-in kitchen heater. If flue conditions are such that condensation is not quickly eliminated, a permanent drain should be provided. This should be done with any of the larger types of instantaneous water heaters in any event.

There is no denying that one of the outstanding developments in the gas appliance field has been the growth of gas water heating. Within the recollection of many of the present generation who have not yet reached middle age, the Saturday night bath was an ordeal.

Many can recall the day when the old galvanized or wooden tub sat yawning in the place of honor in the middle of the kitchen floor, while the decks were cleared for action. The family wash boiler, buckets, kettles and pans covered the top of the red-hot kitchen range and steam clouds rose like incense to the God of Cleanliness. The family waited in various states of preparedness in the sitting-living-dining room. Generally, the children came first, or rather they didn't come—they were "rounded up and dragged"—squirreling to the brink of the tub while the elders of the family wrestled in the super-heated kitchen filling more kettles and pans with water to be heated for the next victim. Father came next to last and when weary Mother got her turn, she took what partly heated water was available, slithered across a floor well-smeared with soapsuds and laved her tired body in water that was just as much too cold as the first baths had been too hot.

Contrast these none-too-remote Saturday nights with the convenience and luxury of even the most modest modern home when every member of the family may now

have unlimited hot water instantly at the turn of the faucet, any day or any night. One cannot view these two pictures without a sense of gratitude to the gas industry for the tremendous strides it has made. All that the user needs to know about any of the modern heaters is "Turn on the faucet," provided that the engineer or architect has done his work properly.

And those of us concerned with the designing of homes owe it to our profession and to our clients to see that this great convenience is properly installed so that it will function with the greatest efficiency. To secure the best possible service the hot water piping should be designed and installed to provide continuous circulation thru the system. With this hot water is available instantly at all fixtures. This will usually add only a few feet of one-half or three-quarter inch pipe. This should be used with either an instantaneous or storage type heater. The entire system of hot water piping, including any storage tanks, should be covered with asbestos or magnesia covering, the cost of which will be saved in a few years by the saving in gas.

We must study the capacity required and make sure that it is sufficient to meet the maximum demand based on baths per person, housework, dish-washer, washing machine and other hot water demands.

We must not permit the installation of an instantaneous hot water heater where the water pressure is less than 25 pounds at the highest fixture or where the gas pressure is low. (Some authorities consider 15 lbs. water pressure sufficient but 25 lbs. is better.)

Where there is low water pressure or low gas pressure, we must influence our client to install a storage system. Heaters of this type operate independently of variations in gas or water pressure and maintain water at the exact temperature for which the thermostatic moment valve control is set.

We should remember, after we have determined the type and size of gas water heater to be used, to place the heater in such a location as to insure the shortest distance of water travel between heater and faucets.

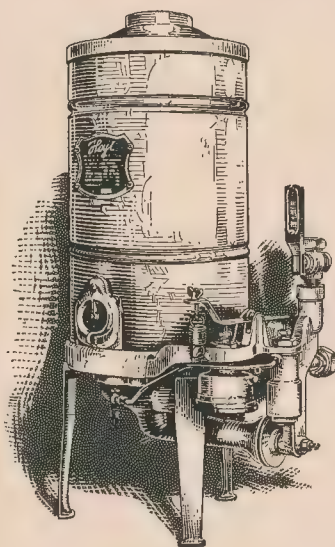
The gas line should be run direct from the meter and should be of sufficient size.

There is no question that proper determination of the size of the heater to be installed does not always receive the thought and care that it should. Some storage heaters with a capacity of 18 gallons of hot water are being installed where 60 gallons should be provided. With most of the storage systems, they recuperate completely, after depletion of hot water, inside of half an hour. But, as often happens, when three members of the family want to use the bath at almost the same time and the tank capacity is only 20 gallons, the first gets 10 gallons of hot water, the second ten gallons that is only lukewarm and the third is out of luck. Every heater should be of size sufficient to take care of any needs that might arise. Between 20 and 60 gallons capacity there is scarcely any difference in first cost or maintenance cost when divided over a period of years.

Many of the modern apartment buildings of four, six and eight apartments are installing individual instantaneous hot water heaters in each apartment. The first cost is cheaper than with a central water-heating system and the individual heater is much more satisfactory to

[Concluded on page 46]

# Economize with Hoyts



## New Model 30

The Hoyt Automatic Water Heater, New Model 30, has created widespread interest among the leading Architects, Contractors and Plumbers.

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The water is heated but once—when it passes through the coils as the faucet is opened, and is ready for immediate use. An unlimited supply of hot water is available, with no waste.

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## EARTHQUAKE-RESISTING FOUNDATIONS

[Continued from page 6]

ings, on account of the cellular construction, but also a considerable degree of flexibility, which is what we most need to have in a foundation to stand and absorb earthquake shocks without distortions or disintegration.

It seems to us that such structures can be made typical and standard for earthquake countries like ours and be adaptable to all classes and kinds of buildings of a certain magnitude. This is possible by altering the general dimensions in each case, say the size of the cells and the general reinforcement.

No consideration for concentrated loads are necessary for transmitting them through the piers to the soil below. Previous to the building of the raft, care should be taken to consolidate the ground where required, especially in those points of heavy concentrated loads. Such consolidation, partial or total, would be made by the incorporation in the soil of piles or other materials in order to increase locally the density and, consequently, the bearing power of the soil.

We do not expect that this very brief description, outlining the typical foundation we suggest for earthquake areas, will be accepted by all the Engineers and Architects, especially by those who want fundamental formulas more than theoretical considerations or at least exhaustive and well conducted experiments, but we will be glad if this sketch of ours will serve to induce others to work out this important problem even in a very different way and along lines of their own experiences.

Of course, for the smaller types of buildings it will be possible to modify the ideas suggested by us by causing the various footings to be tied together in such a way that the building will swing as a unit. The average building, although well tied and braced above the ground, is designed primarily for gravitational stresses only. They are not designed to resist the lateral dynamic forces.

Further studies of this important problem, by our California Engineers and Architects, would be very welcome, for we must learn to build in our part of the country in such a manner as to resist such disastrous earthquakes as the last one of Santa Barbara.

\* \* \*

## MODERN HEATING AND VENTILATING

[Continued from page 45]

tenant and owner because it assures the small user of hot water that he will not be paying for the heating of water used by his neighbors. The maintenance cost is, of course, eliminated and the operating cost to each tenant very low.

In this article an effort has been made to point out, in a general way, some of the more important rules for gas water heater installation, but not infrequently the individual installation offers its special problem. The engineer and architect has available detailed instructions with diagrams and specifications from many of the numerous manufacturers of gas water heating appliances and nearly all of them maintain excellent installation advisors who are practical men, eager to serve you without charge. The wise architect will make use of their services. The wiser he is the more often he will call upon them. For proper installation is the real key, and the only key, to completely successful hot water heating with gas.

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# NATIONAL MONTHLY BUILDING SURVEY

[PREPARED BY S. W. STRAUS & CO.]



**UNPRECEDENTED** building activities continue throughout the greater part of the country with no indications of an immediate let-up. September permits and plans filed in 369 leading cities and towns showed a gain of nearly 40 per cent over the same month last year and 17 per cent for the nine-months period ended September 30.

While gains are fairly general a somewhat spectacular situation exists in New York City where there was a 91 per cent gain over September last year. For the nine-months period, however, New York is only 11 per cent ahead of 1924.

The South again led all sections of the country. Miami established a record of unusual interest, ranking eleventh among the cities of the United States in building activities since January 1. The fourteen principal cities of Florida reported building permits of \$25,582,231 for September as against \$5,447,341 for the same month last year. Birmingham, Ala., Louisville and several of the larger Texas cities also displayed great activity. The indications seem to be that the ensuing winter will

witness a continuation of extensive building operations in many parts of the South.

For the first time in the history of the country, the 25 leading cities passed the \$2,000,000,000 mark for the three-quarters period. In Boston more than \$10,000,000 of plans were filed in September, giving that city fifth place with a gain of more than 170 per cent. St. Louis, Pittsburgh, Portland, Ore., Kansas City, Seattle and Buffalo also reported greatly increased volumes of current building.

## THE LABOR SITUATION

The situation in the building crafts was reported generally well stabilized. The settlement of the jurisdictional dispute between the international union of bricklayers and plasterers was looked upon as an important factor. No acute shortage of labor was reported and employment conditions seemed to be in a very wholesome condition. In Florida many contractors were working their employees nine and ten hours a day, the wage scale for skilled mechanics ranging from \$12 to \$15 a day with time and a half for work in excess of the standard eight-hour workday. Notwithstanding the abundant construction now in progress in Florida contractors there reported that sufficient labor was available.

## DESIGNING AGAINST EARTHQUAKES

[Continued from page 61]

trough meet or augmenting the effect where crest and crest or trough and trough coincide.

You can simulate this tangle of radiant waves by causing a pane of glass, which should be firmly clamped at one edge, to vibrate by drawing a violin bow across its free edge. If the glass be covered with sand the grains will arrange themselves in patterns, showing that there is order where we would expect chaos. In the case of an earthquake the arrangement assumed by the combina-

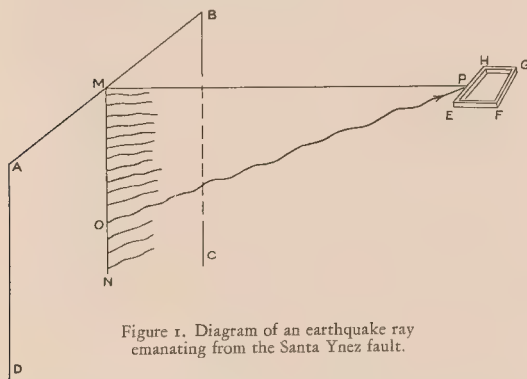


Figure 1. Diagram of an earthquake ray emanating from the Santa Ynez fault.

tions of elastic waves is in three dimensions instead of two as on the glass and it is so modified by variations in the local resilience of the rocks that we could not foresee the distribution of local maxima and minima even if we knew just how the energy would be radiated from the vibrating fault plane.

At first sight it would seem as though we might just as well throw up our hands and continue to go it blind, designing buildings without reference to earthquake faults. But some reflections on the situation in Santa Barbara would suggest otherwise.

The elastic energy radiated from a fault plane diminishes in intensity very rapidly with the distance. Other things being equal, the shortest line from a fault plane

to a building will be the direction of propagation of the most effective wave striking that building. In the case of a vertical fault, like ABCD in Fig. 1, this will lie in a line perpendicular to the fault plane, which will be on a level with the structure as MP. If the fault plane lies at a low angle, as in Fig. 2, the most effective wave will occupy a correspondingly steep position, as OP, and houses on the surface above such a fault will experience a vertical motion. Other rays will be projected from the front, as XY, and there will be those which when looked at in plan will appear perpendicular to the course of the fault. Vertical and the low angle faults both took part in the activity at Santa Barbara.

The low angle fault, shown in Fig. 2, represents the Mesa fault at Santa Barbara. Fig. 1, the diagram of a high angle fault, may stand for the Santa Ynez fault. The former lies south of the railroad tracks, surrounding the "Mesa" and dips southward under the Santa Barbara channel. The Santa Ynez fault skirts the base of the mountain range of the same name, running east and west.

The activity of the Mesa fault was demonstrated in two different ways. A resident of a house situated as indicated in Fig. 2 felt a vertical vibration and saw the tiles march

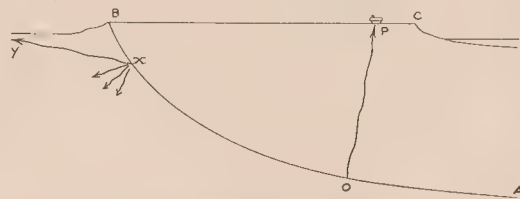


Figure 2. Diagram of the Mesa fault.

down the roof as they were jolted up and down, without violent lateral motion. Buildings on State Street, on the contrary, were struck by a wave which advanced nearly horizontally.

State street runs northwest and southeast, approximately parallel with a section of the Mesa fault and about a mile from it. The buildings, facing northeast and south-

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west, had their parapet walls thrown into the street. The effect was sudden and violent. A wave, propagated northeastward, struck the foundations and threw the fronts out to a distance from the building line. That wave emanated from the front of the Mesa fault, as the writer

Fig 3b

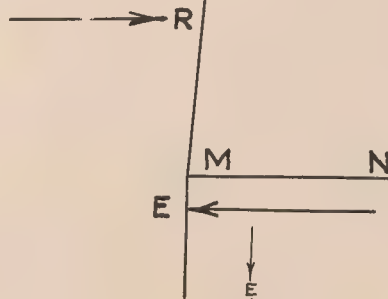


Fig 3a

Figures 3a and 3b. Diagrams of the San Marcus Building in plan and elevation showing the reaction of the two wings upon the corner [a] and the couple under which the corner collapsed [b].

understands it. Its action could have been foreseen and the walls might have been tied into the frames of the stores and banks in such manner that there would have been but little damage. Fortunately there is good reason to believe Santa Barbara will profit by its sad experience.

Turning our attention to the Santa Ynez fault we may first take note of the evidence which shows that there was an impulse that was propagated southward from its surface. Whether it originated there or was reflected back is a question we need not consider here. Its effect on an automobile which was running southeast down State street caused the driver, an engineer, to look back to see who had run into him from behind. In so doing he saw the San Marcus building fall.

What had happened? A strong earthquake ray or impulse had come from a northwesterly or northerly direction and had driven the foundations of the San Marcus building southward with the ground in which they were set. Fig 3 a. The two wings opposed their inertia to the movement and offered a resistance equivalent to a force applied at the level of the center of gravity, that is somewhere near the level of the second story ceiling. The structure was thus subjected to the action of a couple, Fig. 3 b, the weight of both wings was thrown upon the column at the corner, and the column collapsed. We may pass over the weakness known to have affected the resistance of the concrete. Even if the strength of the concrete had been up to standard it may be doubted if the corner could have stood up under the excessive load

[Continued on page 51]



# HOLLOW BUILDING TILE AND SANTA BARBARA

[ BY CHARLES W. MEIGHAN ]



HOLLOW building tile's ability to withstand violent earthquake shocks, when properly laid up, is set forth in a report of the Santa Barbara earthquake which has been issued by the Hollow Building Tile Association, Conway Building, Chicago, Illinois. The report which is presented in attractive booklet form and contains many graphic illustrations was prepared by Joseph K. Moore, consulting engineer, Hollow Building Tile Association, and M. B. Reilly, district manager, Pacific Northwest Brick Manufacturing Association. The report is being brought to the attention of engineers and architects by Mr. N. A. Dickey of the California Brick Company of San Francisco.

As is inevitable in disturbances like that which took place in June at Santa Barbara, a great mass of misinformation manages to get into circulation, in first reports. Too frequently, the building industry has seen some general disaster such as that at Santa Barbara seized upon by manufacturers of one kind of material to find fault with a competing kind. An overzealous enthusiast for reinforced concrete construction, for example, seizes upon an isolated building of brick, which was not properly designed in the first place, where foundations were inadequate, where walls were not properly tied and tells the world or as much of it as he can get to listen: "Ah, ha! All the brick in town fell down!" He neglects to point out that scores of other structures of brick, which were properly designed and properly constructed, came through without injury. And, too often, the brick man has followed similar tactics with reference to some other material with the result that the building industry is left with a mass of claims and counterclaims and no more real information than it had in the beginning.

Happily, Santa Barbara has seen less of this sort of thing than has been the case in similar upheavals in the past. It is true that in the first excitement of the disaster and for several days immediately following it, many misstatements found their way into the lay press. But the various material men now have alert, forward-looking associations and these associations, with scarcely an exception, have had men of unquestioned professional integrity conduct their investigations.

The result of all this has been that some really worthwhile lessons have come out of Santa Barbara and it seems to be generally agreed by all manufacturers of building materials of whatever kind that it is distinctly up to themselves to see that all building is done right and that all materials, if properly made and properly used, will serve the purpose for which they are intended.

The stucco man no longer insists that stucco is the only material; he is willing to admit that there are occasions when a brick or even two might be used to advantage. The brick man does not deny that there are times when stucco has its uses, the hollow-tile maker concedes that there are materials at least as good as his for certain purposes and the really hopeful thing is that all of them appear to be united on the broad, general principle that proper construction will stand, the other kind will fall and that it is the duty of all to work for good building in general.

Such is the underlying theme of most of the reports of various associations that have come from Santa Barbara and the very interesting report of the Hollow Tile Association is no exception. Messrs. Moore and Reilly point out that there were no failures of load-bearing walls constructed of hollow building tile at Santa Barbara.

They give many specific instances, such as the Christian Science Sunday School, the Cottage Hospital, the Edward Lowe, Max Fleischmann and other residences, the Buick Garage, Nash Garage and County Hospital, where tile came through practically unscathed, and say that this fact is remarkable when it is considered that only a few buildings were constructed of load-bearing tile which would have passed the A. S. T. M. specifications, the remainder of the buildings being built of partition tile which is not designed or manufactured for load-bearing work.

The report is profusely illustrated and quite convincingly shows that where there were building failures, the fault was not of the tile but, in some cases, due to failure of the framework to meet the shock. The report points out that cement lime mortar is a necessity for good tile construction, and says: "With this knowledge it is highly important that the producers and distributors of tile do not call their work done when their materials are sold, but see to it that their materials are properly used and are bonded together with proper mortar."

And, here again, we see the awakening of an enlightened attitude on the part of all manufacturers that they "do not call their work done when their materials are sold" but regard it as a duty to see that those materials are properly used.

The conclusions drawn in the Hollow Building Tile Report, which is well worthy of a place in the files of any architect and which may be obtained from Mr. Dickey at 604 Mission Street, San Francisco, are as follows:

"When the history of the Santa Barbara disaster is finally written it will prove to be a history of poor construction, poor design, poor application of materials, and poor mortar. This is the consensus of opinion of all the prominent architects who have visited the scene, and it is also the opinion of the discerning public. No material completely withstood the shock, but of all the materials that were used, hollow tile probably gave the least financial loss.

"In discussing the matter with one prominent insurance engineer the statement was made that if steel frames had been used and curtain and partition walls had been made of hollow tile, instead of a disaster, the Santa Barbara earthquake would have been an interesting experience. Business would not have been interrupted, and while a few tile would have been shaken and dislodged they could easily have been replaced, and the losses would have been at a minimum. The writers of this report feel that this statement is largely true, but there would still have been an excess of damage because of poor workmanship and especially poor mortar."

## TO CORRECT AN ERROR

Through one of those inadvertent typographical errors which will creep into any magazine occasionally, the words "Ramona Roof Tile" were substituted by the printer for the words "Architectural Terra Cotta" which should have formed the heading of the advertisement of N. Clark & Sons in our October issue. The advertisement, corrected, appears in the current issue.

## BRICK OUTLOOK GOOD

There is now every indication that 1925 will be a banner year in the brick industry, marking not only a record amount of brick made and sold, but noteworthy also because of the remarkable development of the industry to better serve the public.

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# JUDICIAL CONSTRUCTION OF ARCHITECT'S CONTRACT

[ BY LESLIE CHILDS ]



THE question of the amount of fees, and the manner of their payment, is usually so plainly stipulated in contracts involving architectural work that there is little room for after dispute in relation thereto. However, regardless of how carefully a contract of this kind may be drawn, conditions may thereafter arise in the subject matter of the contract that throw doubt upon how the different provisions of the agreement are to be construed.

As an illustration of how easily a situation of this kind may arise the Kentucky case of *Dittoe et al. vs. Morgan*, 268 S. W. 1065, is worthy of examination. The facts and circumstances which culminated in the action were, as taken from the report, in the main as follows:

In this case the defendant owned a building lot and desired to erect thereon a business house of the value of \$20,000. With this in mind he employed the plaintiffs, who were architects, to draw the plans and superintend the construction of the building. This contract was in writing and the portion of it that dealt with the compensation of the plaintiffs provided:

That the plaintiffs were to be paid a sum equal to 7 per cent of the total cost of the construction of the building; that upon completion of the working drawings and specifications 3 per cent was to be paid; that upon receipt of bids an additional 1½ per cent was to be paid; and that the remaining 2½ per cent was to be paid as the work progressed. The contract further provided:

"It is also agreed that, until a definite estimate is furnished the architects, charges shall be based upon the proposed cost of the work, \* \* \* It is further agreed that in case the work is abandoned before completion, the architects shall be reimbursed for the amount of labor performed prior to such abandonment, in accordance with rates established by this contract."

The plaintiffs went to work under this contract, drew the plans and specifications, and upon their approval by the defendant advertised for bids. A number of bids were received but since they ranged from \$35,000 to \$65,000 they were rejected. The plaintiffs made an effort to have the bids scaled down, but the lowest bid they succeeded in getting was \$30,000. In view of this, since the defendant intended to put but \$20,000 into the building, the work was abandoned.

Now up to this time, it appears, the defendant paid the plaintiffs \$600 on account of their services as architects. Following the abandonment of the work the plaintiffs submitted a final bill in the sum of \$1,350, from which they intended the payment of \$600 to be deducted, which left a balance of \$750.

In arriving at this amount, the plaintiffs took the position that since they had prepared the plans and specifications, and submitted them to bidders, they were entitled to the first two installments of the contract, namely 3 per cent and 1½ per cent respectively. In accordance with this, then, the plaintiffs claimed 4½ per cent commission based on the amount of the lowest bid received, namely, \$30,000. This of course made their total compensation \$1,350 as claimed by them.

The defendant declined to pay this bill, and set up that the plaintiffs undertook to secure a bidder for the work at \$20,000; that since they failed in this he was not liable to them for anything, and that he had already paid them more than they were entitled to recover.

The plaintiffs thereupon brought the instant action to recover the amount they claimed as due under the con-

tract. Upon the trial of the cause in the lower court a judgment was rendered in favor of the defendant. From this the plaintiffs prosecuted an appeal to the higher court, and here in reviewing the record and stating the question before it the court, in part, said:

"As it is admitted that the plans and specifications as drawn were accepted as satisfactory, and were sent out and bids submitted thereon, and no objection at any time raised thereto, it is clear that the plaintiffs had taken the first two steps in their contract and were entitled to recover 4½ per cent commission therefor, as herein provided. A question arises, upon what amount shall this be based?"

Following the above statement of its conclusions as to the right of the plaintiffs to recover on a 4½ basis, and the raising of the question of what sum this was to be based upon, the court turned to the provisions of the contract. And here in reasoning on the question involved, the court, among other things, said:

"Accepting this as a basis, plaintiffs were entitled to recover 4½ per cent of \$20,000, or \$900, subject to a credit of \$600, and the court should have peremptorily instructed the jury to find a verdict in their favor for \$300. Wherefore judgment is reversed and the cause remanded for proceedings consistent with this opinion."

\* \* \*

## DESIGNING AGAINST EARTHQUAKES

[Continued from page 48]

thrown upon it in a manner not at all anticipated by the designer. But it may be hoped that the new structure to be built on this site will be adequately strong.

The Arlington Hotel presents a somewhat different illustration of the effect of a stress couple due to unfortunate design. The weakness was inherent in the design of the ground plan. The structure consists of three sections, namely two wings aligned north and south and a central section. Fig. 4. The blow which was struck from the north by the initial impulse drove the foundations south. The north wing swayed northward and recovering swung south. It struck the east end of the central building, which was also swaying. The times of swinging peculiar to each of the two structures, according to the distribution of weights, the relative dimensions, and the rigidity of either, were not the same. The slower pendulum, which in this case was the central section with the heavy water tank in the attic, was struck by the more rapidly swinging pendulum, the north wing. The blow was struck below the belt, so to speak, the center of gravity of the wing being below that of the central section. The latter therefore doubled over.

At the same time the western end of the central section was being battered by the south wing, though with less effect because in the absence of the water tank the periods of vibration of the two sections were less unequal. The central section was thus shattered at both ends and was also subjected to torsional stresses as the blows at opposite ends in opposite directions synchronized.

If this analysis, based upon an examination of the building and such evidence as there is regarding the nature and direction of the shock, be correct, the Arlington failed because the ground plan provided the forces with a destructive opportunity. Assuming that adequate reasons existed to compel the choice of that particular plan or of one similar to it, the architect might forefend against a similar disaster in either one of two ways. He might brace the several sections so rigidly and tie them together so firmly that they would swing as a unit; even so, however, the central section would be liable to severe torsional stresses.

[Concluded on page 53]

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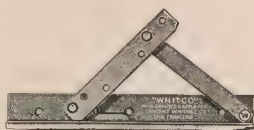


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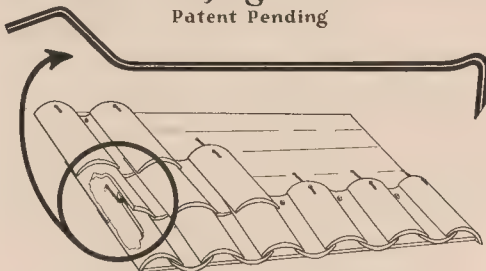
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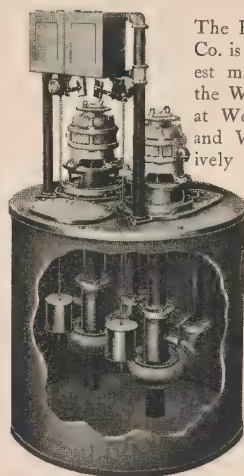


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# DESIGNING AGAINST EARTHQUAKES

[Continued from page 51]

Or he might separate the sections, making each one a distinct, independent structural unit with a rectangular ground plan. Let each such unit be *ship-built*, firmly tied together and braced within itself; let the space between it and the next section be twenty or thirty inches; and let necessary walls or floor connections between sections be so constructed that they will not transmit shock from one section to the other and if crushed may be easily replaced. Light walls of metal lath and cement plaster and a bridge with sliding ends to connect floors would serve.

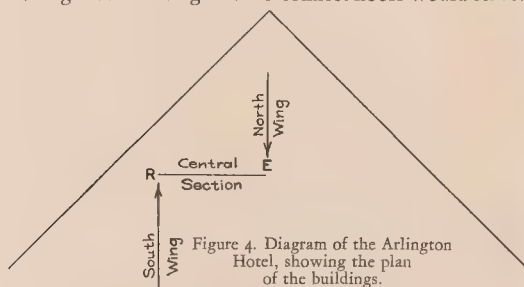


Figure 4. Diagram of the Arlington Hotel, showing the plan of the buildings.

This analysis of the effects observed in Santa Barbara considers the wave which radiates from the fault surface and is propagated out from it. It is known as the longitudinal wave and is a phase of the vibrations usually not considered the most dangerous. Greater destructive effects are attributed to the transverse vibrations, which occur in a direction at right angles to the ray of the longitudinal wave. The longitudinal wave, advancing at the rate of approximately three miles per second, strikes the blow that is often compared to the shock of a heavy truck. It heralds the advent of the terremoto and passes on.

The transverse vibrations then ensue, vibrating in any plane at right angles to the path of the ray and continuing for some seconds or minutes. They thus set up in every building a swaying motion like the movement of an inverted pendulum. Each building has its own period of swing depending upon the height of the center of gravity, the proportions of the dimensions in plan and elevation, and the elastic resistance or rigidity of the structure. The injurious effects are seen in the distortion of frames, the shearing of columns, the cracking and shaking down of walls. They are to be provided against by braces and ties. The longitudinal wave, on the other hand, is to be expected in a line at right angles to the fault plane and will produce a shear in the foundations accompanied by the development of a stress couple situated in a vertical plane and so oriented as to tend to throw the building toward the fault. Provision should be made against damage by this action, and to that end the architect should know in what direction to look for the nearest active earthquake fault.

In general it may be said that the major faults run parallel with the trends of the mountain ranges. But there are diagonal faults branching from the greater ones which, though of minor consequence geologically, may be sources of danger to buildings. The Mesa fault, to which a large part of the destruction accomplished in Santa Barbara may be attributed, is an example of this kind. The Fault Map of California, published by the Seismological Society of America, gives the principal known faults throughout the major part of the earthquake districts of the State, and reference may be made to it for general information. In cases of importance, as for instance in the location and design of a school building, the question of the locations of faults should receive special consideration, and the services of a competent geologist might well be employed to determine them.

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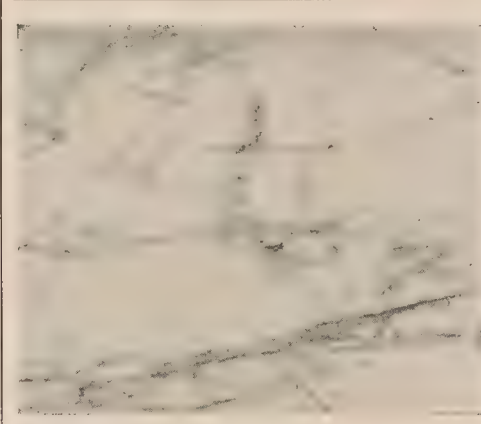
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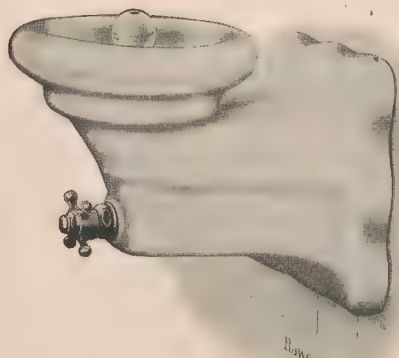


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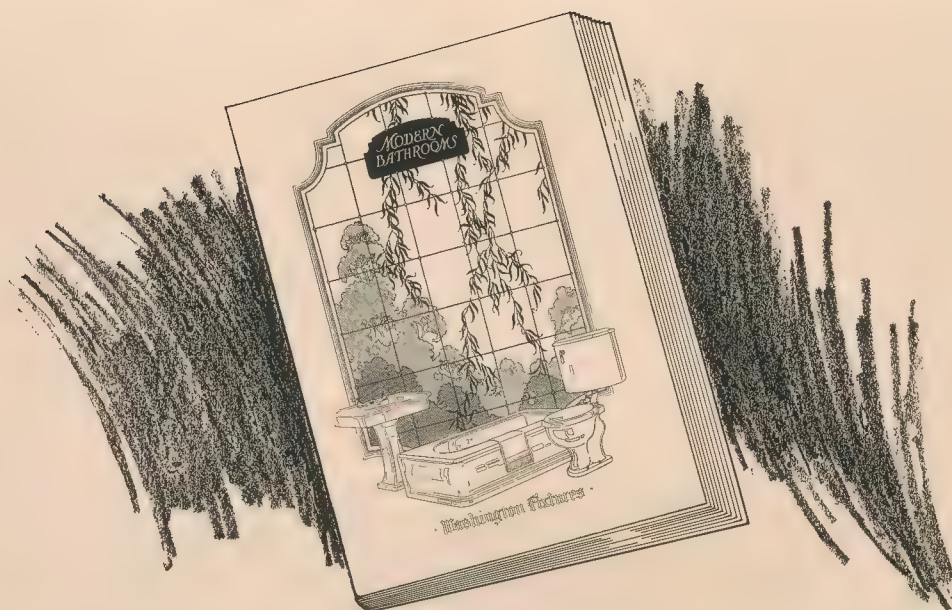
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## SAN FRANCISCO'S NEW PUBLIC UTILITY BUILDINGS

[[ BY HARRIS ALLEN, A. I. A. ]]

**T**HE modern relationship between public utilities and the public is strikingly illustrated by the three buildings recently completed in San Francisco for the Pacific Gas and Electric Company and the Pacific Telephone and Telegraph Company. Not alone is every consideration shown for the convenience and comfort of the public that considerable portion of the public which will use these buildings for the transaction of business but consideration for the public in a larger sense is shown by the pains which have been taken in the matter of architectural character.

To say that the new buildings are a credit to the city means little or nothing. The significance lies in the fact that these public utility companies have given, if not *carte blanche*, at least a very liberal latitude to their architects in the matter of purely esthetic values, so that these

structures stand out as ornaments—one may say, indeed, as monuments—to the city which they serve. A justifiable pride in achievement, a commendable public-spiritedness, a perspicacious business acumen, are all quite certainly indicated in their erection.

Nearest to the "utilitarian" idea is the smallest of the three, the business office building of the Telephone Company (but itself of considerable size). Most conservative of the group, dignified in character, sedate in treatment, it is by no means stereotyped or even severe. Details are well designed and executed, if somewhat delicate in the upper stories for the massive colonnade below, fenestration is interestingly marked, color and texture of material are pleasing. The combination of public service and business requirements is well indicated.

An opportunity for more divergence from convention, and for a more brilliant touch in ornament, was afforded the architects of the Pacific Gas and Electric Company. An eighteen-story building on a conspicuous corner of a wide street, for a power company which could supply flood lighting of the entire structure, gave a chance for treatment which could be unique, even spectacular. No one can deny that the result is brilliantly successful and that no canon of good taste has been violated. Granted that it is a masonry design, hence subject to the criticisms of modernists who contend that the construction of a building should be expressed by its envelope, and so in the nature of a "tour de force," the fact remains that it is an extremely clever solution of the problem. It satisfies—and educates the public, for the perfection of proportion and detail is beyond criticism. Seldom do we see such excellent modeling of sculptural ornament. But it is the coherence of the mass which constitutes its special architectural excellence.

Last to be completed has been the Coast Division building of the Telephone Company. As the great pile has been slowly taking shape and the black steel skeleton has been gradually clothed with white, a profound, increasing interest has grown in the public mind. This is not confined to the layman; I will admit for myself, and I



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suspect it is true of the profession generally, a feeling of uncertainty existed for some time. The effectiveness of its silhouette was unmistakable from the start, but the novelty of its treatment, in line and detail, required a degree of study and familiarity.

Time—even these few brief months—has done its work. To me this building is now a thing of beauty. Its long, lofty lines of piers and mullions, its subtle breaks of outline, diminishing upwards, the delicate accent of its eagle-crested tower against the blue sky, lead to inspiration.

Here is a surprising combination of massive strength and airy grace. Contradictory as that sounds, the building is emphatically a unit. From sidewalk to cornice (or crowning members, for there is no "cornice" as such) the vertical motifs are unbroken until they flower into the interlacing finials which mark each setback of plane. Of the same color and texture, the horizontal panels and features act as a bond, strengthen the feeling of unity in design. Again, the value of scale has been preserved in details of ornament, working to the same end. This required courage, even daring, but to use the conventional forms of ornament would have been dangerous if not fatal.

It will be noted that a distinctly Oriental quality characterizes the detail. In a building erected at "The Gateway to the Orient" this may be justified sentimentally, but I am inclined to think it justifies itself. Take, for instance, the grille in the main entrance arch, which



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will probably be described as Gothic by many, but which is unquestionably Chinese in design and detail; and the lobby inside, whose ceiling was inspired in pattern and color by a fragment of marvelous old Chinese brocade, with a background of faded plum color against which the figures glow softly in dull blues and greens and yellows. On the floor a broad interlacing geometrical tile pattern echoes these shades in a more subdued form. One receives a pleasant shock on entering this lobby, to find a treatment so in accord with the feeling of the exterior; a stylistic setting, no matter how dignified or magnificent, would have sounded a false note.

In the remaining few rooms which have other than severe utilitarian treatment, there is also this adaptation of Oriental motifs and coloring, handled sparingly and skillfully. The practical and technical features of the interior are an integral part of the architectural problem, but are being described elsewhere in this issue. I will only say here that with all the complication and perfection of its structural and mechanical equipment, the cost per cubic foot of this great building compares favorably with that of many smaller ones.

Rodin was wont to criticize most buildings as lacking in "profile." From near and far, from the water which surrounds the city and from the hills which dot its area, the profile of the Telephone Building adds its monumental accent to the mass profile of San Francisco—and this, perhaps, is what gives us most reason for praising its creators.





*Photograph by Gabriel Moulin.*

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## THE "LAST WORD" IN MECHANICAL EQUIPMENT

[BY J. LESLIE MEEK]



HE remarkable completeness and modernity of heating, mechanical and electrical equipment are a source of delight to everyone conversant with such things visiting the new Coast Division building of the Telephone Company. Seldom does one see such openness, cleanliness and practical utilitarian value combined in such compact and accessible form as are to be found at basement and subbasement levels. Too much praise can not be bestowed upon architects, engineers and those responsible.

The equipment layouts were designed by Miller & Pflueger and A. A. Cantin as architects, with Atkins & Parker as mechanical engineers and Simonson & St. John as electrical engineers. The installation is really "the last word" in equipment layouts and is well worthy of study by all professional men confronted with similar problems. Space precludes detailed description in this article of the mechanical features and installation, but the following condensed description gives one an idea of the completeness and utility of the devices installed in basement and subbasement:

Two A. S. M. E. standard Stirling type water-tube boilers in one battery, each rated at 400 B. H. P. at 150 pounds, working pressure, operated by a five-horsepower electric motor-operated crude oil burner automatically controlled. These boilers operate under regular operating conditions at from three to fifteen pounds pressure for heating purposes and for emergency operation furnish 125 pounds steam pressure for the operation of the 100 H. P. power turbine to operate emergency fire pump.

The boilers are also equipped with vacuum steam atomizing oil burners for emergency operation when electric current is not available.

One automatic 100 H. P. electric motor operated 4-stage 600-foot head fire pump operating at 500 G. P. M. at 500-foot head and 750 G. P. M. at 350-foot head. This pump maintains a 50-pound water pressure at roof Siamese hose connections automatically; but under ordinary nonfire conditions, this pressure is maintained and fire and sprinkler system water supply is furnished by an auto-

matically operated electric accumulator pump and air-pressure tank located in tower tank room. The fire pump is also directly connected to a 100 H. P. steam turbine for emergency operation when electric current is not available. The water supply for the fire pump is obtained from—

One 150,000-gallon water storage cistern located in the subbasement. This storage water is supplied by a deep well pump operating on a 185-foot depth deep well. This cistern is also the source of water supply for the toilet-flushing water system.

One incinerator boiler, equipped with a crude oil burner. This boiler can be operated as a low-pressure auxiliary for heating.

Two automatic electrically operated vacuum return and boiler feed pumps operated on heating system.

Four automatic electrically operated house water pumps interconnected for variable operation on the three cold water supply systems.

One emergency steam boiler feed pump for boiler operation when electric current is not available.

One water softening and filtering plant reduces Spring Valley water to zero softness.

One water sterilizing and cooling plant consisting of an electrically operated ozone water sterilizer. One make-up and one circulating triplex pump automatic electrically operated and pumping pure water through a cooling tank of the carbon anhydride 6-ton capacity refrigerating equipment, supplying 45-degree water to the cooled drinking water system throughout the building, through cork-covered piping to bubble and glass fountains and faucets.

Two hot-water heaters, supplying hot water to the two hot-water systems by gravity head. All hot-water supply except main flow lines is brass piped and fitted throughout.

Two sewage ejectors, automatic electrically operated, for basement and subbasement sewage, leader and rain-water disposal.

Two 10 H. P. automatic electrically operated air compressors connected to compressed air system required by elevator service, garage, etc.

Two electrically operated oil pumps, for oil supply from oil storage tank to oil burners.

One machine shop for plant and building equipment repairs. All machinery direct connected to motors.

Automatic heat-control system, tank signal systems, motor control systems, automatic fire system, pressure control panels, steam flow-meter, etc.

Ventilating system. All basement and subbasement rooms have mechanical ventilation, including boiler and switchboard rooms.

Main electrical switchboard room contains switchboard panel groups consisting of 34 panels for interior lighting, power, elevator service, exterior flood lighting, fire alarm, watchman's call system and main service.

All equipment mentioned is of the latest design for efficient and safety operation by manual and automatic control.

The lighting distribution system is of single phase, sixty-cycle 110-220 volts, three wire, for services and feeders, and 110 volts, two wire, for branch circuits.

A. C. power distribution system is three phase sixty cycle, 220 volts, and single phase, 110 volts, with four wire services and two or three wire single or three phase branches.

D. C. power distribution is 120-240 volts three wire, with three wire service and two wire and three wire feeders and branches where required.

The Butte Electric Equipment Co. of San Francisco were

[Concluded on page 69]



SUB-BASEMENT INSTALLATION, COAST DIVISION BUILDING  
P. T. & T. CO., SAN FRANCISCO





*Photograph by Gabriel Moulin.*

COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA.  
MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



Photograph by Gabriel Moulin.

COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA.  
MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE





*Photograph by Gabriel Moulin.*

COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA.  
MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH COMPANY.  
MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE. LINDGREN &  
SWINERTON, BUILDERS. FROM SUB-BASEMENT FAR BELOW STREET LEVEL  
TO THE FLAGPOLE FOUR HUNDRED NINETY FEET ABOVE, EVERY PAINTING  
AND DECORATING OPERATION IN THIS NOTABLE BUILDING WAS  
PERFORMED BY QUANDT CRAFTSMEN.

*"Co-operation for Quality"*

## A·QUANDT·&·SONS

374 GUERRERO STREET / SAN FRANCISCO / 3319 CENTRAL AVENUE / LOS ANGELES

[ PAINTERS AND DECORATORS / SINCE 1885 ]

*Quandt quality is available for the small job as well as the large. Our operations are State-wide*



# An Achievement in Craftsmanship

THE PAINTING AND DECORATING REQUIREMENTS IN THIS GREAT NEW TELEPHONE BUILDING RANGED FROM THE WASHING OF THE VAST EXPANSE OF THE EXTERIOR THROUGH ALMOST ALL KNOWN DEMANDS THAT COULD BE MADE UPON THE MODERN PAINTER AND DECORATOR. QUANDT CRAFTSMEN SUCCESSFULLY PERFORMED EVERY OPERATION, WHETHER IT INVOLVED SIMPLE STANDARD WORK OR "BLAZING A NEW TRAIL," WITH THE SCIENTIFIC AND HIGHLY TECHNICAL APPLICATION OF THE EVERLASTING LACQUER FINISH, USED HERE FOR THE FIRST TIME ON SO LARGE A SCALE IN A BUILDING OF SUCH MAGNITUDE ANYWHERE IN THE WORLD. FROM THE MERE WHITENING OF THE WALLS IN THE BASEMENT TO THE ELABORATE VERSICOLOR DECORATION OF THE MAJESTIC ENTRANCE LOBBY, WHETHER THE TASK WAS ONLY ROUTINE OR WHETHER IT CALLED FOR ALL THE SKILL AND ARTISTRY OF A MASTER CRAFTSMAN, WE GAVE TO IT THE BEST WE HAD. AND EVERY BIT OF OUR WORK WAS COMPLETED ON SCHEDULE TIME.

*"Co-operation for Quality"*

## A·QUANDT·&·SONS

374 GUERRERO STREET / SAN FRANCISCO / 3319 CENTRAL AVENUE / LOS ANGELES

[ PAINTERS AND DECORATORS / SINCE 1885 ]

*What we have learned in the study and application of Lacquer is available to you. Let us send you an actual sample of Lacquer as used in the Telephone Building. A postcard request brings it to you*



DETAIL OF ENTRANCE, PACIFIC TELEPHONE AND TELEGRAPH CO. BUILDING, SAN FRANCISCO  
J. R. MILLER AND T. L. PELUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



WO structures that have put their spell upon beauty-loving San Francisco—the Palace of Fine Arts and the Telephone Building. The first was a World's Fair fairy-dream. This is a dream made everlasting in Terra-Cotta.

## GLADDING · McBEAN · & · CO.

GENERAL OFFICE: 660 MARKET STREET, SAN FRANCISCO

*Los Angeles Office:* Los Feliz Boulevard and S. P. Tracks

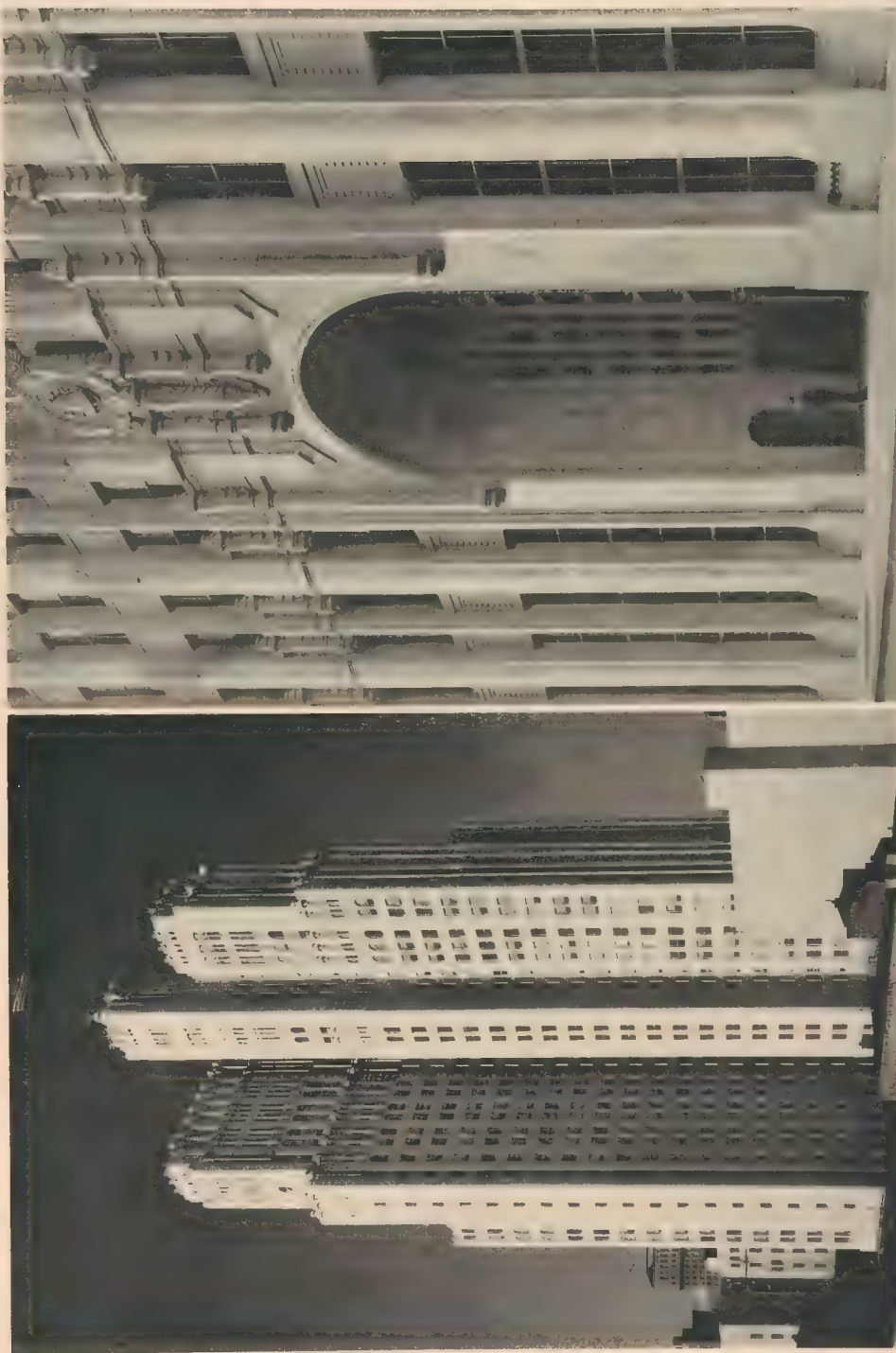
*Seattle Office:* Dexter Horton Building

*Portland Office:* U. S. National Bank Building

*Oakland Office:* Twenty-second and Market Streets







Photographs by Gabriel Moulin.

COURT VIEW—MAIN ENTRANCE—COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO. MILLER & PFUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



*Photograph by Gabriel Moulin.*

DETAIL OF TOWER, COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO,  
CALIFORNIA. MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE





Photo by Geo. V. Van

SAN FRANCISCO FROM  
TWIN PEAKS.  
IN THE RIGHT  
BACKGROUND,  
COAST DIVISION  
BUILDING, PACIFIC  
TELEPHONE AND  
TELEGRAPH CO.,  
SAN FRANCISCO,  
CALIFORNIA.  
MILLER & PELUEGER,  
ARCHITECTS.  
A. A. CANTIN,  
ASSOCIATE



DETAIL OF UPPER STORIES, COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA. MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE





*Photographs by Gabriel Moulin.*

ABOVE, DETAIL OF CRESTING; BELOW, ELEVATOR LOBBY; COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA. MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



*Photograph by Gabriel Moulin.*

MAIN ENTRANCE DOORS, COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO.,  
SAN FRANCISCO, CALIFORNIA. MILLER & PELUEGER, ARCHITECTS.  
A. A. CANTIN, ASSOCIATE





*Photograph by Gabriel Moulin.*

ELEVATOR LOBBY, COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO.,  
SAN FRANCISCO, CALIFORNIA. MILLER & PFLUEGER, ARCHITECTS.  
A. A. CANTIN, ASSOCIATE



PACIFIC TELEPHONE AND TELEGRAPH CO. BUILDING · SAN FRANCISCO  
 Miller & Pfueger and A. A. Cantin, Assoc. Architects · A. Quandt & Sons, Painters

**T**HE new Pacific Telephone and Telegraph Co. Building stands out as a great monument on the rapidly changing San Francisco skyline. Fuller products play no small part in this great architectural achievement. Pioneer White Lead was used exclusively and glass for the entire building was furnished by W. P. Fuller & Co.

## W. P. FULLER & CO.

301 MISSION STREET, SAN FRANCISCO

Thirty-two branches in twenty-six Pacific Coast and Intermountain Cities  
 Factories at South San Francisco, Los Angeles and Portland

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PAINTS Since 1849 VARNISHES

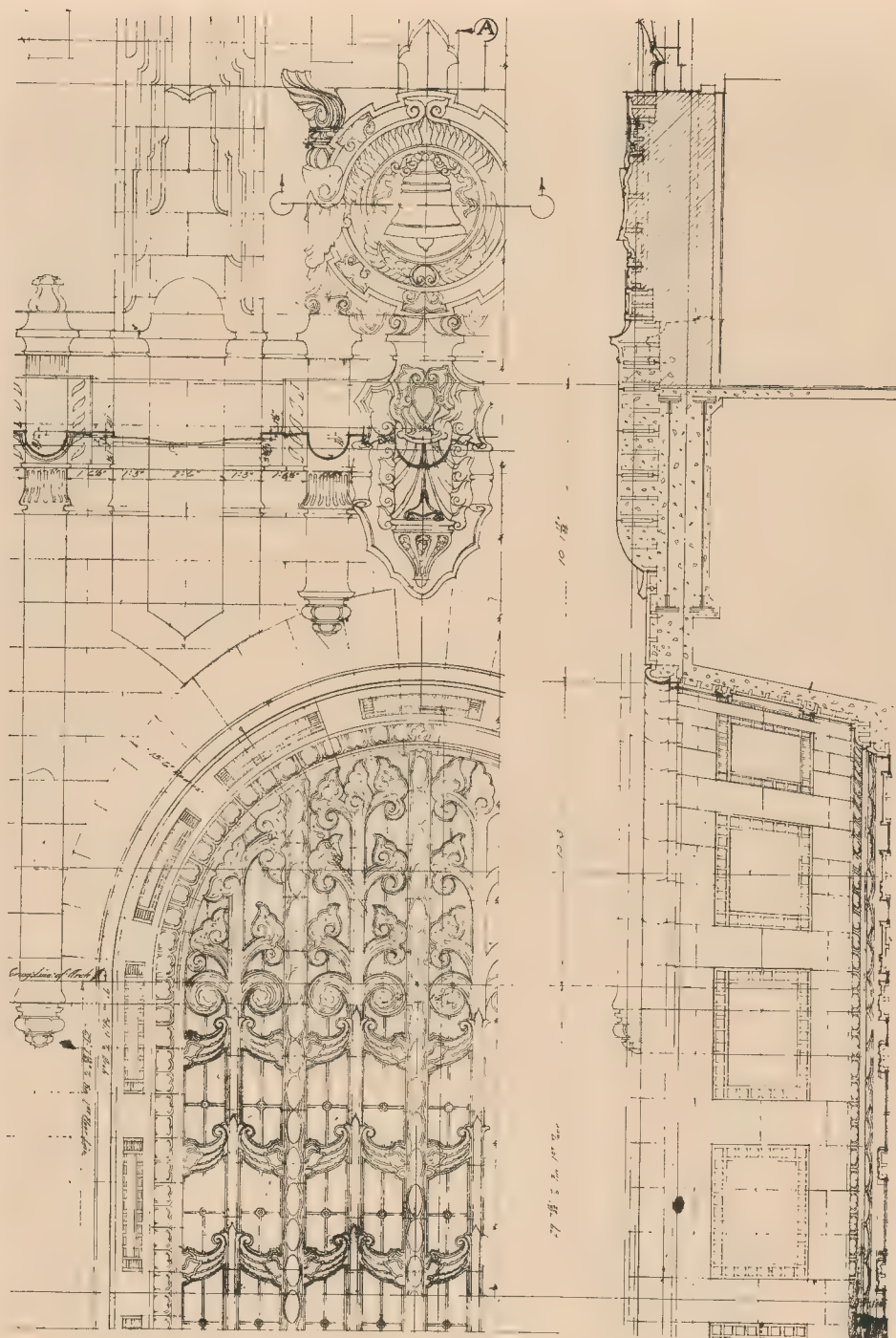
PIONEER WHITE LEAD





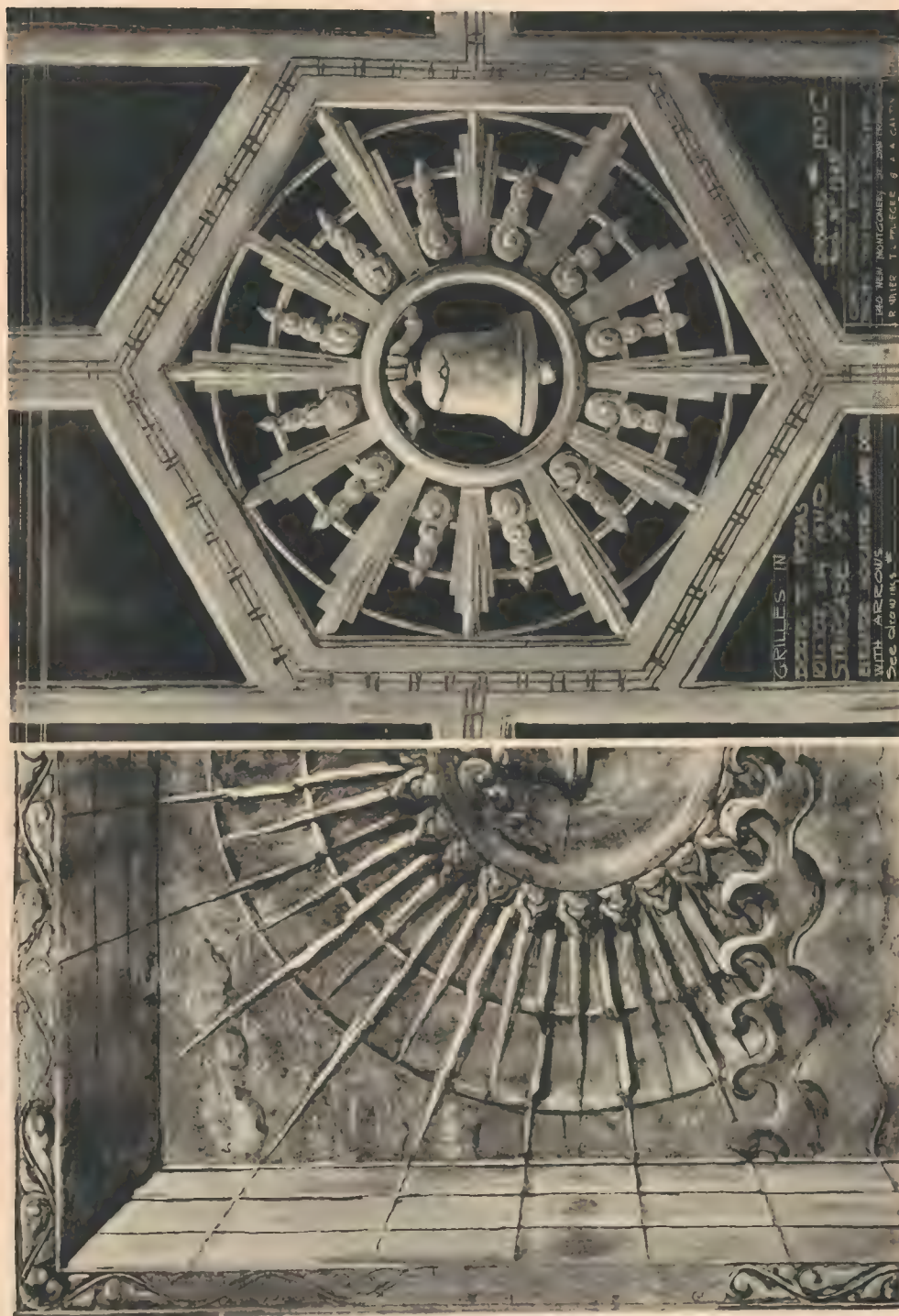
*Photographs by Gabriel Moulin.*

ABOVE, AUDITORIUM; BELOW, DIRECTORS' ROOM; COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA. MILLER & PFLUEGER, ARCHITECTS. A. A. CANTIN, ASSOCIATE



DETAIL OF MAIN ENTRANCE GRILLE, COAST DIVISION BUILDING, PACIFIC TELEPHONE AND  
TELEGRAPH CO., SAN FRANCISCO, CALIFORNIA. MILLER & PFLUEGER,  
ARCHITECTS. A. A. CANTIN, ASSOCIATE





DETAIL OF FIRE BACK, DIRECTORS' ROOM; DETAIL OF ELEVATOR GRILLE; COAST DIVISION BUILDING, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO

## SHEET METAL PRODUCTS



ELEVATOR FRONT, COAST DIVISION BUILDING  
MILLER & PELUEGER, ARCHITECTS, A. A. CANTIN, ASSOCIATE



HOLLOW METAL DOOR AND TRIM  
COAST DIVISION BUILDING

**H**OLLOW Metal Trim, Elevator Fronts and Cabs for the Coast Division Building of the Pacific Telephone and Telegraph Co., San Francisco, manufactured and installed by the Forderer Cornice Works. Sixteen hundred and twenty-five Campbell Solid Metal Window Frames and Sash for the Coast Division Building furnished and installed by the Forderer Cornice Works.

## FORDERER CORNICE WORKS

*Executive Offices and Factory:*  
Potrero Avenue and Sixteenth Street, San Francisco

*Los Angeles Office:*  
927 W. M. Garland Building, 9th and Spring Streets



# SHEET METAL PRODUCTS



PACIFIC GAS AND ELECTRIC BUILDING  
BAKEWELL & BROWN, ARCHITECTS



ELEVATOR FRONT  
PACIFIC GAS AND ELECTRIC BUILDING

SHEET Metal Work, Nonpareil Skylights, Hollow Metal Doors and Trim and Met-Elec Base for the Pacific Gas and Electric Company Building, San Francisco, manufactured and installed by the Forderer Cornice Works.

Campbell Metal  
Windows  
Nonpareil Skylights  
Sheet Metal Work

Met-Elec Base  
Baked Enamel Finish  
Hollow Metal Doors  
and Trim

## FORDERER CORNICE WORKS

*Executive Offices and Factory:*  
Potrero Avenue and Sixteenth Street, San Francisco

*Los Angeles Office:*  
927 W. M. Garland Building, 9th and Spring Streets

## THE PACIFIC GAS AND ELECTRIC CO. BUILDING

[[ BY CHARLES W. MEIGHAN ]]



NOTABLE among the office buildings which have reared their noble heads to the San Francisco skyline during the past year is the distinctive division headquarters of the Pacific Gas and Electric Company. A large office building with extensive frontage on a street as wide as Market street and extending 18 floors above the street level afforded ample opportunity for distinguished architectural treatment and it seems to be generally agreed that Bakewell & Brown, the architects, have made the most of their opportunity.

Treatment, constructive and progressive, utilitarian but none the less impressive, has given this large and important public utility building a definite character already quite positively established in the public mind and certain to become more permanently fixed in general esteem with the mellowing of time. For, in architecture, not like so many other things, one can not say that "familiarity breeds contempt." On the contrary, familiarity inspires something akin to love in the case of well-designed and carefully executed buildings.

That this is the case with the Pacific Gas and Electric Company building, or with other of our fine new semi-public buildings, many "a man in the street" who sees it daily can testify. It seems to me, as a mere layman, that this creation of a fine building which causes men, even in the rush and hurry of crowding for a ferry, to pause for a moment and, almost subconsciously, to catch their breaths with the sheer loveliness of seeing an old friend in a new play of light or shadow, of creating so useful a thing as a great public utility building and yet giving it so much of outward beauty that it takes on, with time, a character, an identity and as much a personality as a sentient being, would compensate in great degree the architect whose creation it is, for the many things that reward other artists, yet are denied him.

We have been long accustomed to expect sermons in stone in our temples, epics in marble in our palaces, poems in brick in our auditoriums, but it is a recent and happy development, and typically American, that we are coming to be given these same artistic harmonies in structures of cold steel and concrete and stone and brick and all the other materials which go to make up the complex modern business structure.

One of the most successful solutions of the office building problem has been the simple grouping of a multitude of elements into a few divisions so that the essential unity is not lost. The modern American structure, be it office building, warehouse or even grain elevator, has as its basis some traditional architectural style and its scheme of composition is such that when the many complex parts are completed the building is a single unit.

In the Pacific Gas and Electric Company building this unity has been accomplished by the division of the structure into a high and important base, a general shaft and, finally, a crowning motive.

In a general way the composition was arranged to be in harmony with the adjoining Matson building, while an effort was also made to have certain contrast to that building and to adopt a scale and mass which would by such contrast show the semipublic character of this building and give it an identity of its own.

The entrance is marked by the story of the power industry, framed by two massive figures. Keystones recurring over the first-story arches serve to carry the interest around the two facades and lead up to the central motive and its larger keystone.

The base of the building runs up through three stories to be in keeping with its neighbor. With the height of the first story and the large spaces of the first and second stories, this becomes a natural and effective arrangement. The main shaft between the base and the crowning motive, stripped of all ornament, becomes a great pedestal for the columns and arcade of the fourteenth and fifteenth floors. Uniform distribution of windows over the entire surface makes them but incidents in the general mass, so that they merely give texture to the shaft and do not count as separate units.

In marked and happy contrast to the simplicity of the treatment of the shaft are the base and crowning motive. The base with its deep reveals and consequent deep shadows is colored by ornaments sparingly used and placed with nice discrimination. The arcade at the top is broken up so as to give a brilliant play of light and shadow and the varying planes and surfaces of walls and columns give an impression of richness. Arch forms, decorations and mouldings are used in both base and arcade.

In the entire scheme there is complete accord between the actual spaces and the architectural treatment and the architects have achieved their result with no sacrifice of practical requirements to architectural requirements, or vice versa.

For the most part, the interior plan is similar to that of any logical modern office building. The offices are well lighted and well arranged. Those departments which are in closest touch with the public are placed on the first floor. The entrance leads directly into a large and handsome vestibule running parallel to the front of the building and at either end of this vestibule are found the entrances to the main departments of this floor. The elevator lobby is ample and well proportioned. Treatment throughout is simple and dignified. From the second to the sixteenth stories the typical floors all have the same general arrangements. The executive offices, with lobby and corridors paneled in oak, are located on the fourteenth floor. The sixteenth floor is set back for architectural reasons and there is a balcony or promenade around this story. Here are located the employees' rest-rooms, restaurant and library. The color scheme of the entire building is singularly appropriate and harmonious.

The limits of space preclude in this article anything like a complete description of this building, even if the writer had the ability to give such a description, which he has not, but it is hoped that from this brief mention of some of the "high lights" of the architectural treatment, the reader has gained at least an inkling of the general excellence of the structure.

To satisfy one's own esthetic sense, to please those who are to occupy a structure and provide adequately for their daily requirements and to give to the public at large a creation which stimulates the imagination and inspires a greater respect for beauty—these are no mean achievements and it can not be denied that these things Bakewell & Brown have done in this modern laboratory of public service.

\* \* \*  
UNIQUE FLORIDA HOME

The residence of J. F. Bernet, which has recently been completed in Coral Gables, Florida, is one of the most unique homes ever built in this country. Designed after the Mediterranean style by J. Mack Sawyer of North Carolina, the house has been constructed without the use of wood, nails or screws except in the doors and kitchen cabinets. The cost was \$75,000.





*Photograph by Gabriel Moulin.*

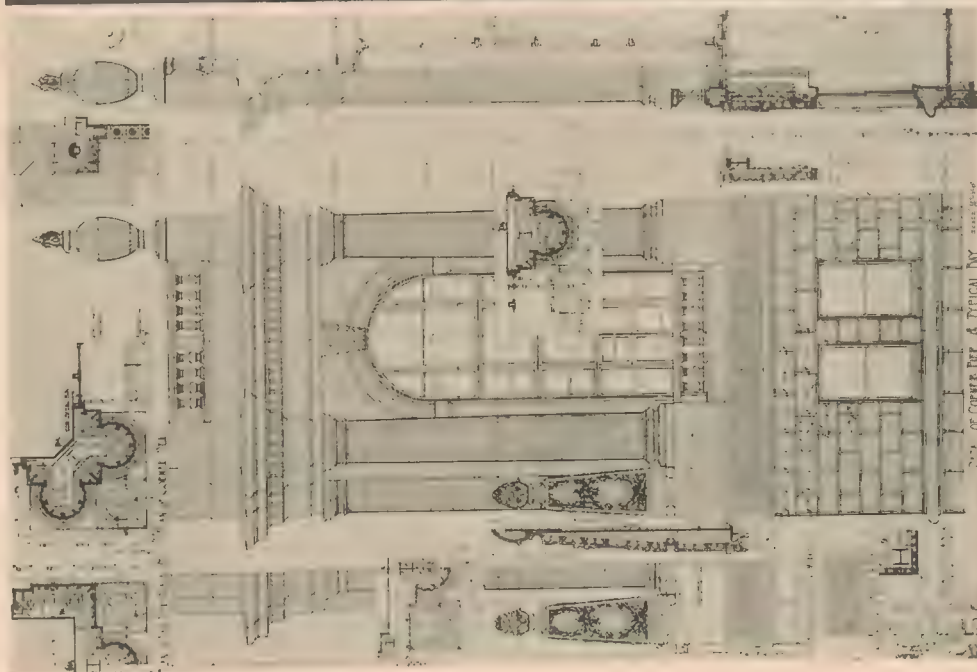
PACIFIC GAS & ELECTRIC CO. BUILDING, SAN FRANCISCO. BAKEWELL AND BROWN, ARCHITECTS



*Photograph by Gabriel Moulin.*

MAIN ENTRANCE, PACIFIC GAS & ELECTRIC CO. BUILDING, SAN FRANCISCO.  
BAKEWELL AND BROWN, ARCHITECTS





DETAIL OF UPPER STORIES, PACIFIC GAS & ELECTRIC CO. BUILDING, SAN FRANCISCO. BAKEWELL AND BROWN, ARCHITECTS

## Complete Electrical Installation

in

Pacific Telephone and Telegraph Co.  
and Pacific Gas and Electric Co. buildings

by

### BUTTE ELEC. EQUIPMENT CO.

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530 FOLSOM STREET • SAN FRANCISCO

TELEPHONE DOUGLAS 2046



FELIX BUTTE • SOLE OWNER



Pac. Gas and Elec. Co. Bldg.  
Bakewell & Brown, Architects

## Entire Elevator Equipment

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### Spencer Elevator Company

166-180 Seventh Street • San Francisco





*Photographs by Gabriel Moulin.*

ABOVE, AUDITORIUM; BELOW, MAIN LOBBY; PACIFIC GAS & ELECTRIC CO. BUILDING, SAN FRANCISCO.  
BAKEWELL AND BROWN, ARCHITECTS







*Photograph by Gabriel Moulton.*

CEILING PANEL, PACIFIC GAS & ELECTRIC CO. BUILDING, SAN FRANCISCO.  
BAKEWELL AND BROWN, ARCHITECTS



BUSH STREET BUSINESS OFFICE, PACIFIC TELEPHONE AND TELEGRAPH CO., SAN FRANCISCO. BLISS & FAVILLE, ARCHITECTS

## Architectural Terra Cotta

The architects of all the prominent buildings finished this year for the Pacific Telephone and Telegraph Company in California have in each case specified Architectural Terra Cotta for use on the main facades.

The above is one of several of these prominent buildings for which we made the Terra Cotta.

### N · CLARK · & · SONS

MANUFACTURERS OF

*Architectural Terra Cotta, Pressed Brick, "Ramona" Roof Tile and Kindred Clay Products*

112-116 NATOMA STREET · SAN FRANCISCO





*Photograph by Gabriel Moulin.*

BUSINESS OFFICE, PACIFIC TELEPHONE & TELEGRAPH CO., SAN FRANCISCO. BLISS & FAVILLE, ARCHITECTS

.....to be truly "CALIFORNIAN"  
*Modern Buildings must have.....*



The New  
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Manufacturers of  
 Face Brick  
 Fire Brick  
 Sewer Pipe  
 Electric Conduit  
 Flue Lining  
 Drain Tile  
 Stoneware

Visit display of large  
 brick panels in yard at  
 325 North Avenue 23  
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CALIFORNIA is a colorful state. Its gorgeous backgrounds have developed a new type of architecture — the dominant note of which is color. To be genuinely "Californian" — reflecting the beauty of their environment — modern buildings must be colorful.

... To assure the permanence of the colors you choose — you must use face brick. Face brick alone matches the splendid settings of California's outdoors.

... Pacific Face Brick is made in such a variety of distinctive colors that an architect may create desired effects and combinations as easily as though he were choosing his tones directly from a California landscape.

... And with the passing of years, the colors of Pacific Face Brick will not fade. Age makes them even more attractive — while the sturdy, enduring strength of face brick construction knows no time limit.

FACE BRICK ❧ ELECTRIC CONDUIT ❧ VITRIFIED SEWER PIPE ❧ STONE WARE ❧ AND OTHER CLAY PRODUCTS

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SKETCH, BUSINESS OFFICE, PACIFIC TELEPHONE & TELEGRAPH CO., SAN FRANCISCO.  
BLISS & FAVILLE, ARCHITECTS



RESIDENCE OF L. B. HAM, 1400 LAKE STREET, SAN FRANCISCO  
E. E. YOUNG, ARCHITECT. WILLIAM HEIDENREICH, MASON

## Face Brick Walls backed with Dickey Mastertile

The cost of Face Brick walls is substantially lowered by backing the brick with Dickey Mastertile instead of solid masonry.

Dickey Mastertile has the fire- and decay-resistance inherent in burned clay. Its air cells make it approximately half the weight of solid masonry.

Each 8-inch Dickey Mastertile takes the place of six brick in the wall. *Half as*

*heavy—six times as large!* This means a saving in cartage and handling, a saving of weight, a saving of one-third to one-half the labor, and one-half the mortar in setting up the wall. No furring is ordinarily necessary, the plaster being applied directly to the tile.

This method of wall construction is finding ever-increasing favor with architects.

# DICKEY

## BURNED CLAY PRODUCTS

DICKEY MASTERTILE • FACE BRICK • FIRE BRICK

Partition Tile, Furring Tile, Paving Brick, Sewer Brick,  
Step and Walk Brick, Drain Tile, Flue Lining

*Made by*

CALIFORNIA BRICK COMPANY *and* LIVERMORE FIRE BRICK WORKS, INC.

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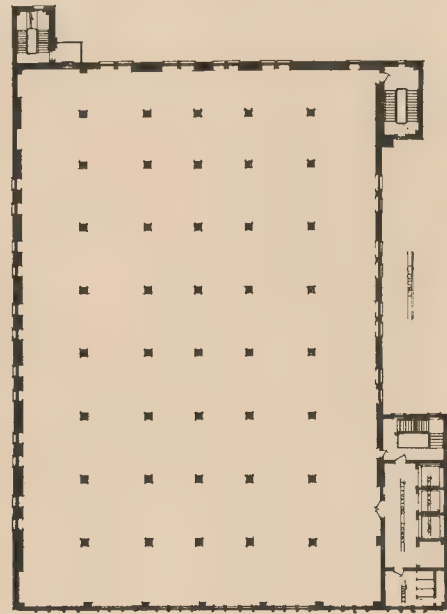
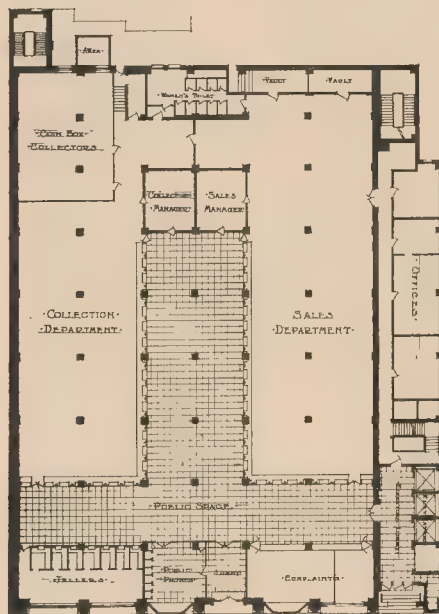
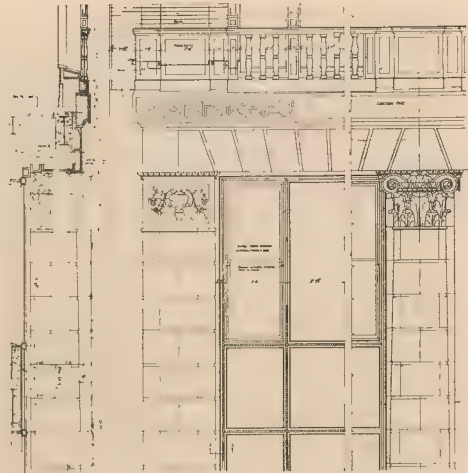
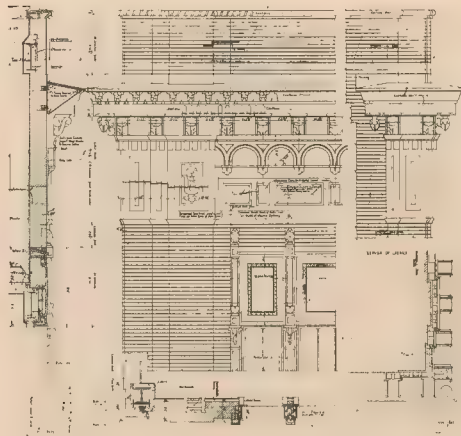
SAN FRANCISCO AND OAKLAND





*Photograph by Gabriel Moulin.*

DETAIL OF LOWER STORIES, BUSINESS OFFICE, PACIFIC TELEPHONE & TELEGRAPH CO., SAN FRANCISCO.  
BLISS & FAVILLE, ARCHITECTS



- FIRST FLOOR PLAN -

TYPICAL FLOOR PLAN

ABOVE, DETAILS OF EXTERIOR. BELOW, FLOOR PLANS. BUSINESS OFFICE, PACIFIC TELEPHONE & TELEGRAPH CO.,  
SAN FRANCISCO. BLISS & FAVILLE, ARCHITECTS





Photographs by Gabriel Moulin.

—TYPICAL UPPER STORY—BUSINESS OFFICE, PACIFIC TELEPHONE & TELEGRAPH CO., SAN FRANCISCO. BLISS & FAYVILLE, ARCHITECTS



## The Logic of Specialization

It is no mere coincidence that a new standard in the field of Wall Finishes has been set by

### *Perma-Light* Wall Finishes

Specialization counts more than ever today. Our reputation has been built upon our success in solving painting difficulties.

*Made exclusively by*

**HILL, HUBBELL & COMPANY**  
Paint Specialists

EXECUTIVE OFFICES AND WORKS • SAN FRANCISCO

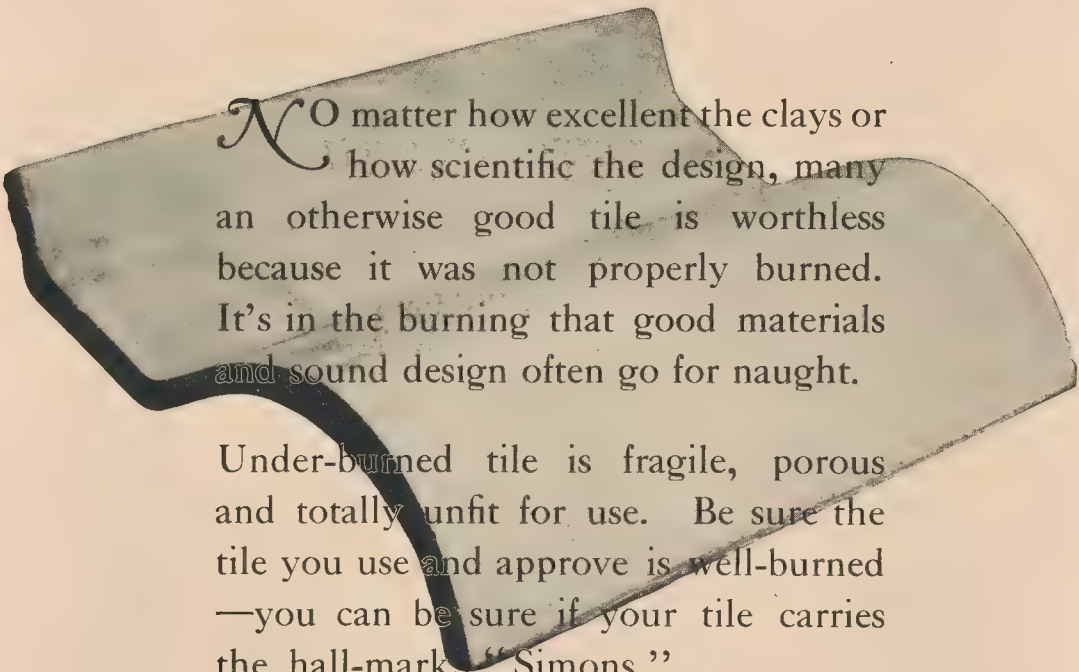
Los Angeles • Oakland • Portland • Seattle • New York • Tulsa





PRELIMINARY STUDY FOR RUSS BUILDING, SAN FRANCISCO. GEORGE W. KELHAM, ARCHITECT

# It's Mostly in the Burning



NO matter how excellent the clays or how scientific the design, many an otherwise good tile is worthless because it was not properly burned. It's in the burning that good materials and sound design often go for naught.

Under-burned tile is fragile, porous and totally unfit for use. Be sure the tile you use and approve is well-burned—you can be sure if your tile carries the hall-mark, "Simons."

## SIMONS SPANISH TILE





*Rendered by R. E. Riggs.*

PRELIMINARY STUDY FOR NEW OLYMPIC CLUB BUILDING, SAN FRANCISCO.  
BAKEWELL & BROWN, ARCHITECTS



A portion of  
the New Christian Science Church, South  
Normandie Street, Los  
Angeles, showing its  
Roof of

## CLAY SHINGLE TILE

This form of roof construction lends itself to a wide variety of architectural treatments. A beautiful roof forever.

*Building designed by  
Meyer & Holler, Inc.*

*"The Standard of Quality in Clay Products"*

**L.A. Pressed Brick Co**

ENTIRE SIXTH FLOOR ..... FROST BLDG  
Second and Broadway ..... TRINITY 5761  
LOS ANGELES





A SOUTHERN  
CALIFORNIA HOME  
OF BRICK.  
RAY J. KIEFFER,  
LOS ANGELES,  
ARCHITECT



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# SANTA BARBARA CONSTRUCTION LESSONS

## IV THE CALAMITY AT SANTA BARBARA\*

[BY EDWIN BERGSTROM, A. I. A.]



THE stories of the damaged buildings of the Santa Barbara earthquake of 1925 could be written without leaving the swivel chair in Los Angeles. To one who has studied the calamities in San Francisco, Calexico, El Centro, San Bernardino, Hemet, San Jacinto and Inglewood there is little new offered by the ruined streets. The stories of these disasters and the lessons to be learned from them were written for every architect and every layman after each of those calamities. But the story and its lesson is just "news"—it is stale with the telling. The architect and the engineer neglect to put the lessons into practice and the owner seems always willing to "take the chance," because it is cheaper to gamble with the forces of Nature than to spend the money to build right.

Judging by the cross-sections of many of the buildings which are exposed after the earthquake, many times it looks as if the architects, engineers and the builders did not understand, or at least did not put into practice, the simplest fundamental principles of construction and too often it has been perfectly evident that there had been little or no intelligent supervision of the work of construction. When supervision had evidently been given, in many instances it must have been very laxly performed. Incompetent supervision by the architect and engineer has been found by every owner and every contractor; too many of the architects especially do not seem to have that knowledge of practical building which enables them to know what to look for and what to prevent in building construction work. Far too often is it true that the supervision of the architect is a professional pretense.

The calamity of Santa Barbara, like all the others, is an indictment of the business of building; of the architect or engineer who designs the flimsy framework through ignorance, through fear of losing the job if he designs substantially or because he lets the owner, the material man or the contractor inveigle him into cutting the structural framework even to the limits of safety under normal stress; of the contractor who skins and skimps and cuts every corner, and takes out of the building what little of the factor of safety may have been left by the architect and the engineer; of the banker who loans the money intrusted to him on the security of flimsy construction; of the owner who will endanger life and limb of his tenants and those who pass his property in order to save the dollar that may mean safety to all. How many architects and engineers are there who will refuse to go on with the job rather than design a building to its lowest possible terms of safety?

The materials of construction no doubt will be condemned because of this calamity. The failure of the spindling concrete columns and unbraced frames will be laid to the tile filler walls or to the thin brick filler walls or to the thick brick filler walls, as the case may be. It all depends on what you are attempting to prove. Brick, tile, concrete, all jumbled together in the same building; walls two feet thick tied and bonded to walls six inches thick; walls of brick 150 feet long and four stories high held together by sand and wood. Is it any wonder that tile fails, brick fails, concrete fails, steel fails, when the

designer or the builder expects concrete or tile or brick to develop tensile strength or to hold together when the adhesive material is but sand that crumbles between your fingers? Materials failed not because of inherent weaknesses, but because of their unintelligent use and combination and poor workmanship in erecting them. The well-designed, honestly built, intelligently superintended, reinforced concrete framework did not fail in Santa Barbara or elsewhere whatever were the materials in the filler walls! The steel frame honestly riveted and tied and supported did not fail. Buildings of tile, fragile as is that material, are standing uninjured. Even the lowly concrete block can show an absolutely uncracked example in the midst of the surrounding failures in Santa Barbara. Do not let anyone persuade you that the failures were due to the materials used. Use any materials you desire, but use them intelligently. Give each of them a chance to develop its natural stress. Do not expect a compressive material to take a tensile strain. Do not blame a tensile material if it fails to come through in times of stress when you have used up all its strength in doing its everyday work. Do not expect a wall of blocks to stand if you do not fasten one block to the other. Do not expect a building to stand unwavering when the ground all about it and under it is weaving and writhing. Do not expect that your spindling, unbraced building will not rack more than the substantial, well-braced structure, even if it be but one story high. Brace and tie the materials of construction together and use as few different kinds of structural materials as you can in any one structure. It is always hard to tie two dissimilar materials together. How much harder it is to tie together a jumble!

The manufacturer of the material usually has done his job well; perhaps the building would have been better if he had continued his responsibility over the use and treatment of his material.

Keep the lines of strain and thrust going straight through your buildings, without offsets, and use beams and girders to carry these strains and thrusts. Do not be misled into using any methods of construction which are not founded on the old fundamental methods of carrying loads. Do not expect that a solid mass of material, however well tied it may be to a thinner mass, will not develop troubles at the juncture any more than you would expect a great mass of building to be tied to a small mass without developing some degree of failure in the smaller mass. The direction of the earthquake movement in Santa Barbara was so nearly parallel with the axes of many of the buildings that the behavior of the various masses of buildings with reference to each other was perhaps a new lesson taught by Santa Barbara. In the damage caused by this earthquake in most of the larger structures can be clearly read the story of what happens when a large mass is in contact with a small mass.

The lesson that has been taught by the earthquake in the elements of design of the framework of the building is thereby brought directly into the larger element of the plan design and the architect should use the utmost discretion in arranging the elements of his plan with respect to its masses and to the crushing that will inevitably take place at the juncture of varying masses.

\*Reprinted from Bulletin Allied Architects' Association of Los Angeles.



## The Day of Individualized Heat Has Arrived!

In office buildings and apartment houses everywhere architects are specifying individual heating units for each room.

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Here are the Five Leading Types of Pacific Gas Heating Appliances—they ventilate while they heat.

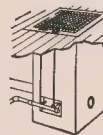


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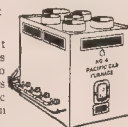


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# MODERN HEATING AND VENTILATING PROBLEMS

## III

### PRACTICAL METHODS OF SPACE HEATING

[BY THOMAS B. HUNTER]  
*Hunter & Hudson, Consulting Engineers*

AUTHOR'S NOTE.—This is the third of a series of informative articles regarding the selection and installation of modern types of cooking, water-heating and space-heating equipment.



PROPER ventilation has been emphasized in every article of this series and it must be said again that this occupies a place of primary importance in any discussion of gas-fired space heating equipment. Lest the reader get the impression that undue stress is being placed on ventilation in connection with our heating problems, the following simple facts may well be stated:

The reason we should use only those types of appliances which discharge their products of combustion to the outside through adequate chimneys or vents is that air is not a simple substance but consists of a mechanical mixture of nitrogen and oxygen by volume.

Oxygen, as we all know, is one of the most important elements of the atmosphere. It is in action in the chemical process of combustion and also in the physiological respiration of human beings. It supports life. Carbon dioxide, nitrogen, water vapor and small amounts of other gases are nearly always found when fuels are burned, whether they be gas, coal, wood or oil. Carbon monoxide, a deadly gas, is also formed if the combustion is incomplete. With gas burning appliances one of the principal reasons for venting is to carry off the water vapor which makes the air oppressive and causes "sweating" of walls, windows, etc., if not removed. The amount of this water vapor formed on combustion of oil gas is between 5 and 6 gallons to each 1000 cu. ft. of gas burned. It is therefore not only necessary but vital to discharge these products through a chimney so that they will not contaminate the air which the occupants of a room must breathe. An interesting discussion of the necessity of venting gas burning appliances will be found in the California State Board of Health weekly bulletin for November 14, 1925.

In space heating with modern appliances to utilize gas as a fuel, there are so many methods and appliances available that a detailed discussion of selection and installation might well fill a volume or two instead of the limited space of this brief article.

Briefly, the multitude of appliances available to the engineer or architect, where gas is the chosen fuel, may be divided into the following groups:

1. Warm-air furnaces.
2. Steam and hot water boilers.
3. Miscellaneous small appliances.
  - (a) Floor furnaces.
  - (b) Radiant fires (vented).
  - (c) Radiators (vented).

Taking the first group, it has been definitely established that the warm-air furnace which burns gas as a fuel is an absolutely safe, convenient, sanitary and quick-heating type of equipment. It supplies fresh, pure, warm air to any or all rooms without the air coming in contact with gas flame or fumes. The electric control lights the furnace and regulates it for low, medium or full heat.

The proper installation of a furnace is even more important than the selection of a good piece of equipment.

An official standard code of general installation specifications for gas-fired warm-air furnaces has been compiled by the Gas Heating Engineering Committee of the Gas

Appliance Society of California and this code gives the details regarding proper installation. It should be in the hands of every person concerned with design or installation of these systems. Since it is available to every one interested in the subject, the writer does not feel that it is necessary to discuss at length such details in this article. But it should be stated that a good warm-air furnace installation must contain a furnace of adequate size, as centrally located as possible, a carefully designed and constructed system of warm air distributing ducts and registers, and a cold air intake connecting the house to the furnace. Insulation of hot air ducts, using at least 1/4 inch asbestos air-cel, is essential, yet it is often neglected. Dampers in the various air lines are desirable.

A properly designed chimney is essential. The vent connection from the furnace to the chimney should be as short as possible and provided with a drip-T. It should also be provided with a draft hood unless the drip-T serves as one. Copper pipe is recommended for all vent connections. Should there be no chimney to connect to, vent must not simply terminate outside of house, but a good flue should be built on outside, and extended well above roof of house to insure a good draught; and provided with an A-top or equal to prevent down-draught. It is highly important to have a good vertical flue to connect to and the use of copper pipe, or equal, for the vent connection, adds only a few dollars to the cost but many years to the life of the job.

Rate Gas Con. per Hr. (cu. ft.)...	50	100	150
Minimum Size Vent Connection..	3 in.	4 in.	4 or 5 in.
Rate Gas Con. per Hr. (cu. ft.)...	200	300	400 600
Minimum Size Vent Connection..	5 in.	6 in.	7 in. 8 in.

Advantages of the warm air system are: low first cost of installation, heating combined with ventilation, adaptability to light or intermittent service and to sudden changes in outdoor temperature, low cost of operation.

Steam and hot water systems are available in a multitude of types and sizes to meet every requirement. That they are among the most satisfactory methods of heating known today, thousands of these systems in California homes and offices will testify. Much of their popularity is due to the following advantages:

Most durable and long-lived system of heating with lowest depreciation and maintenance cost; steam, vapor and hot water systems are not affected in circulation and transference of heat by wind pressure, radiators may be designed to harmonize with the architectural rendering or color treatment of any room, or may be set behind ornamental grilles. Any of these systems easily lend themselves to automatic control; radiators in rooms not in use may be turned off. With gas steam or hot water systems, there is neither noise, smoke, dust nor fire hazard.

So far we have touched upon only the larger installations for heating an entire home or building and we have not mentioned the infinite number of smaller appliances such as floor furnaces, vented radiant fires and vented gas radiators which occupy no small place in any consideration of this problem, especially in California where the heat requirements of the small home, office or apartment are not so much for a great amount of heat as for individual heat which can be instantaneously controlled to

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# VERTICAL TRANSPORTATION IN TELEPHONE BUILDING

[BY E. P. FORD]  
*Otis Elevator Company*



VERTICAL TRANSPORTATION in the new Coast Division Building of the Telephone Company is furnished by nine Otis signal control elevators. These elevators are of the multivoltage, micro drive, gearless traction type. They are located in two banks, one on either side of the main lobby. One bank has four elevators traveling to the twenty-sixth floor and one to the twenty-seventh floor. The other bank has four elevators traveling to the twenty-second floor with provision for a fifth elevator to be installed when necessitated by increased tenancy of the building. The speed of the elevators is 700 feet per minute. This increase in speed has been made practicable through the use of signal control. The following paragraphs briefly describe the system:

When the passengers enter the car and call their floors, the operator presses corresponding buttons on a bronze panel which contains two rows of buttons indicating the stops in the up and down directions. As these buttons are pressed they record the stops on the floor selector which is a part of the controller. The controller will then cause the car to stop at the floors recorded, when the car is traveling in the proper direction.

At the starting signal, the operator moves a lever which causes the pneumatic door operators to close both the hatchway and car doors. The action of the elevator is now automatic until the doors have again been opened. As the doors close and lock, the car starts, and accelerates rapidly to full speed. When the car is within a few feet of the nearest landing for which a call has been recorded, the main motor slows down and the micro drive levels the car with the floor, and as the car stops, the doors open. After the operator has again moved his lever the action is repeated, continuing in the same manner until the end of the car's travel. If, however, a waiting passenger has pressed a button in a hall, that stop is also recorded on the floor selector, and the first car approaching in the proper direction will stop.

When the car reaches the end of its trip the mechanism controlling the direction of travel is automatically re-

versed and the elevator is ready for the return trip. The operator may also mechanically reverse the direction of travel at any point, if he falls behind schedule.

Pressing the proper buttons for passengers announcing their floors and moving the lever which controls the closing of the doors are the only duties of the operator which concern the operation of the elevator. The multivoltage control insures uniform acceleration and retardation, which are adjusted for the greatest speed which will not be disquieting for the passengers. The micro drive levels the car with the floor and holds the level while the car is at the landing.

During loading or unloading, the hoist ropes stretch or contract slightly, but if the platform moves more than a quarter of an inch, the micro drive returns it to the floor. The signal control stops the car at the proper floor and opens the doors, whether the call has been recorded from within or without the car. When the stop has been recorded from the hall, the floor selector affected is that of the first car approaching in the proper direction. This car will automatically stop unless it has a capacity load, and the operator presses a special button which will allow his car to continue its travel and at the same time transfer the signal to the floor selector of the next following car.

The added service afforded by the signal control elevator is apparent. The operator is relieved of remembering floors, stopping his car and opening doors. He can therefore use his time to speed up traffic to and from the car. Automatic stopping permits a greater rated speed. Automatic leveling of the car with the floor eliminates the time lost in making false stops. Automatic opening of the doors reduces the time for this operation to about half that required for manual operation. Each of these operations insures a slight saving of time, and repetition at each landing makes a saving of many seconds in the round-trip time, and a shorter interval between cars.

Multivoltage control automatically increases or decreases the voltage which various conditions require, thus reducing power consumption. Smooth operation and the elimination of false starts and stops reduce wear and tear. The design and rugged construction of the signal control reduce maintenance.

## RARE ARCHITECTURAL BOOKS

A COLLECTION of two hundred and fifty rare foreign architectural books has just been received from Europe by The Rapid Blue Print Company of Los Angeles. The books will be on display and for sale at their establishment during the months of December and January. The collection, mostly of out-of-print books, contains many titles very difficult to obtain and some exceedingly rare first edition copies, such as "Le Grand Durand," Letarouilly's "Edifice de Rome Modern," "Le Vatican Et La Basilique," etc. Other interesting titles are "Baukunst Spanien," by Junghaendel, "Prisse d'Avennes—L'Art Arabe" and "Ysendyk Documents Classes."

This is the first real opportunity the architects of California have had to examine at first hand such a collection, and undoubtedly the exhibition will be well attended.

In the short period of eighteen months, this concern has acquired a library of over five hundred titles. With the 250 in the exhibit, these make the finest architectural library west of Chicago.

Arthur W. Angel, Architect, Los Angeles, announces the removal of his office to 3400 East Fifth Street.

## VAULTS IN NEW BUILDINGS

AMONG the many vaults to be installed in the new Coast Division Building of the Pacific Telephone & Telegraph Company, by the Hermann Safe Co. of San Francisco, the largest on the 19th floor for use of the treasury department is 18 feet by 25 feet. It is lined with 3/4-inch steel lining, the doorways are of the latest design. This vault contains 60 steel lockers.

The Hermann Safe Co. also manufactured and installed all lockers, etc., for the P. G. & E. Building, San Francisco. The Hermann Company operates the only safe and vault factory on the Pacific Coast. They have installed vault equipment in more than 500 banks and many of the large office buildings and pride themselves on close cooperation with architects.

\* \* \*

According to statistics compiled by G. B. Schneider, manager of the Washington Iron Works, pioneer plumbing fixture manufacturers, there are at least 50% more bathrooms in the houses built in the last five years than there were in houses built during a similar period a decade or so ago.

# BATCHELDER TILES



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## SOLVING THE TELEPHONE INSTALLATION PROBLEM

[[ BY C. W. BURKETT, C. E. ]]  
*Pacific Telephone and Telegraph Co.*

**I**N the construction of new buildings the installation of a telephone system is just as important as the plumbing installation. As a rule, telephone companies do not install telephone cable conduits in buildings. The builder himself must arrange for all such work that is to be done, as the telephone companies will only install such materials as they can remove and salvage in case the building is torn down.

Sometimes after a building is nearly completed considerable work has to be torn out to provide for an adequate telephone system. Conduits are built that are not sufficiently large, and another mistake often made is when the telephone companies find they are expected to pull cable around several corners. This would be possible with wire, but not with cable.

In line with this general practice the telephone engineers have designed a special underfloor duct system for the Telephone Building at 140 New Montgomery street, San Francisco.

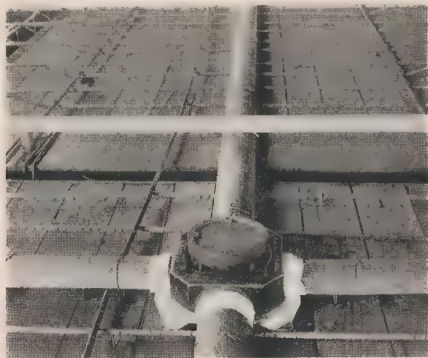
In taking up this problem they found that over 1,200 people were to be housed initially, increasing to 2,000 people within eight years. It was estimated that initially it would be necessary to care for some 12,000 to 13,000 originating telephone calls daily. In addition to wires for telephone service, wires for messenger and stenographer signals must be installed. The job was to give all of this service without having any loose or visible wires or cables in the offices or in the hallways; that is, to have ample telephone and signal service wires available everywhere—all hidden from view and readily installed and removed.

To accomplish this, channels or underfloor ducts were constructed as part of the floor slab and so spaced as to be available at any point, not only for the initial occupancy, but at any time during the life of the building.

Underfloor duct is usually placed in the fill, but in this case no fill was used, so that duct was installed in the concrete slab. The engineers determined the maximum telephone service required by floor areas and then proceeded to locate the duct runs so as to be available where required.



TYPICAL INSTALLATION, COAST DIVISION BLDG.,  
P. T. & T. CO., SAN FRANCISCO



FLOOR JUNCTION BOX CONNECTING BRANCH DUCTS,  
COAST DIVISION BLDG., P. T. & T. CO.,  
SAN FRANCISCO

Because of the number of wires to be provided for and the thinness of the floor slab it was necessary to have made a special semielliptical duct having a height of two inches. The finished slab is 5 inches thick with 1 inch of concrete below and 2 inches above the duct.

The ducts radiate from wall distribution boxes located at convenient points just above the baseboard, and at intervals in the duct run permanent floor outlets with removable covers flush with the finished floor are provided. These outlets also serve as junction boxes where necessary.

Holes are drilled in the floor over the duct line where service is desired and fittings installed through which the wires and cables are pulled to the desk or table where the telephone or signal button is located.

\* \* \*

### A NEW "UNDERGROUND SKYSCRAPER"

Negotiations have been completed for what is to be the world's largest office building on the entire block, bounded by Lexington Avenue and Depew Place, 43rd and 44th Streets, New York. Seven complete stories of the building will be entirely underground; thus establishing a new record for an "underground skyscraper." The underground building will stand in a gigantic cavern torn from the solid granite of Manhattan Island in what will be one of the world's most notable engineering feats.



SAN FRANCISCO HEADQUARTERS, THE EGYPTIAN LACQUER MFG. CO. MILLER & PFLUEGER, ARCHITECTS  
G. P. W. JENSEN, CONTRACTOR AND BUILDER. A. QUANDT & SONS, PAINTERS AND DECORATORS

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# LACQUER—AND THE NEW TELEPHONE BUILDING

[ BY GEORGE E. COVELL ]

*A. Quandt & Sons*



NE of the important problems which the architects of the new Coast Division Building of the Pacific Telephone & Telegraph Co. were called upon to solve was that of the decoration of the interior. Time was an essential factor, yet the finishing of the miles of steel trim used in the great building, including metal windows, door casing and base and hundreds of walnut and oak hardwood doors with holly and ebony inlay must be richly decorative, easily cleaned and permanent.

Since much wood, iron and metal work exclusive of that used in buildings had for years been finished with lacquer and as several of the newly constructed buildings in Eastern cities were reported to be finished with this old material used in this new way, a searching investigation of the possibilities of lacquer was decided upon.

Nitro-cellulose lacquers, a by-product of gun cotton, reduced with amylacetate and fortified by the addition of resinous varnish gums were new so far as the painting contractor was concerned. Samples of all the different manufactured lacquers were obtained and exhaustive tests were begun, pending the time when actual application might be begun. Many of these tests required weeks of careful observation. Pliable metal, as well as the actual 18-gauge molded steel casings to be used in the Telephone Building were coated with many different metal primers, fillers and lacquer enamels and when dry and thoroughly seasoned, put to the most severe bending, hammering and abrasion tests as well as to exposure tests from the elements. These tests were much more severe than would ordinarily be possible on the usual accepted varnish or enameled finish surfaces.

But even with the information obtained by these exhaustive tests, our organization was not completely satisfied, so to check up eastern reports and obtain such facts as were available as to the whole problem of the application of lacquer, Mr. Fred Quandt of our firm went East and made a first-hand study. He discovered that at that time, March, 1925, no building of any consequence in the United States had been completely finished with nitro-cellulose lacquer and the report as handed in from his observations of eastern conditions was not enthusiastic.

However, our own tests and experiments and the methods we had developed proved so convincing and encouraging to ourselves as well as to the architects and the engineer of the Telephone Company that it was decided that lacquer under the methods of application we devised was the only material that could be used successfully under the working conditions in existence: dampness, wind and dust, limited time for drying and for completion of the building. The strict time schedule adopted was adhered to in every way, a result that would not have been possible except for lacquer, because lacquer thinned to proper consistency, rightly applied with a nicely adjusted spray outfit or air brush upon a firm, hard foundation, sets immediately. Work may be handled within 20 minutes after its application. Volatile thinners used to reduce lacquers, amylacetate or methyl acetate, commonly known to the layman as "banana liquid," evaporates instantly when exposed to the air.

It was discovered in the course of our researches into the whole fascinating subject that lacquers are of many makes and qualities. Like the Irishman's whisky, all are good but some are better than others. The advantages of a quality lacquer are mainly found in its quick setting

and drying. It is possible to apply two or three coats in a day when necessary. Its hard drying porcelain-like finish presents a full, round lustrous coating of great beauty that will stand severe abrasions, and constant washing with strong alkaline solutions such as janitors usually employ. It may be rubbed to a handsome dull finish or polished to a mirror-like surface. Lacquer enamels are available in practically all colors.

After completing this large undertaking with this material, it is our belief that lacquer finish has come to stay and while it is true that early failures were reported in the automobile industry, most of these were due to ignorance regarding the character of the material used or carelessness in preparation and faulty workmanship in application. Just in the last six months, great improvements have been made by lacquer manufacturers in the chemical composition of lacquers. Naturally we feel a certain pride in having had a part, with the architects, engineers and the Telephone Company in achieving results so gratifying, thus blazing a new trail in interior decorative treatment which will be followed by much more widespread use of lacquer for similar purposes in the future.

Lest one get the impression from this discussion of lacquer that it is the only material used in the interior of the Telephone Building, it should be stated that our organization was also called upon to execute a great variety of other work, using the more formal and generally known methods of decoration throughout this structure. Bold and daring color combinations in the main entrance lobby, extremely decorative use of paint in the highly ornamental cafeteria and decoration of the auditorium and directors' rooms have all been highly praised and offer abundant proof that we do not believe lacquer, useful and beautiful as it is for the purposes for which it was here used, will supplant all materials for all purposes. In decorating of all buildings, paint has its place and so has varnish and enamel and all other materials. But that lacquer will come to be more and more in demand in meeting certain requirements may be confidently predicted.

\* \* \*

Baranger Studios, Inc., announce their establishment in a new home, Mission at Orange Avenue, Pasadena, California.

\* \* \*

Suggestions for hotel lighting are contained in a new booklet published by the National Lamp Works of the General Electric Co., Nela Park, Cleveland, Ohio.

\* \* \*

A comprehensive booklet on "Water Softening" has been published by the National Lime Association, 918 G Street N. W., Washington, D. C.

\* \* \*

"The Low Cost of Dignity and Beauty" is the title of a booklet just published by the Plate Glass Manufacturers of America. An added feature of interest to all architects is a glossary of terms used in specifications for plate glass.

\* \* \*

California Common Brick Manufacturers Association announces the removal of its offices from 811 Sharon Building to 932 Monadnock Building, San Francisco. Mr. R. W. Tempest, consulting engineer, remains in charge.

\* \* \*

R. R. Irvine, Architect, San Francisco, has moved to larger quarters at 747 New Call Building.



Residence of Fletcher Cowherd, Jr., 6140 Morningside Drive, Kansas City, Mo.; Selby H. Kurfiss, Architect, Kansas City; Kohler Plumbing Fixtures furnished by U. S. Water & Steam Supply Co., Jobbers, Kansas City; installed by C. W. Herold Plumbing & Heating Co., Plumbers, Kansas City

THE Fletcher Cowherd Co., Kansas City, Mo., builds fine homes, equipping them, almost always, with Kohler Plumbing Fixtures.

In building for himself, the vice-president of this company, Fletcher Cowherd, Jr., made the same selection. His home on Morningside Drive has Kohler Ware in its five bathrooms and in its kitchen.

This beautiful ware has a special distinction, conferred by grace and dignity of design and by rare quality of enamel—always identified by the name "Kohler" faintly fused in the immaculately white surface. Yet it costs no more than any comparable ware.

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# KOHLER OF KOHLER

## *Plumbing Fixtures*



## THE TERRA-COTTA IN THE NEW TELEPHONE BUILDING

[BY RICHARD PROSSER]



IN designing the Telephone Building the architects, Messrs. Miller, Pflueger & Cantin, were faced with unusual problems, the solution of many of which was found in terra-cotta. It is not enough to say that the completed structure is a great architectural achievement—it is acknowledged to be one of America's most beautiful buildings.

The structural problems presented uncommon features, in that no piling was used for the foundation, the structure being carried on a continuous mat of reinforced concrete. Every pound of structural weight that could be saved made the foundation problem that much easier to meet. This is where the light weight of architectural terra-cotta became an important factor. Through its use, a considerable saving in foundation and in structural steel was effected. If the building had been faced with stone instead of terra-cotta, the weight of the facing would have been about double.

The economy of terra-cotta as a building material is admirably illustrated in the rear elevation of the Telephone Building above the twenty-second floor. The structure is L shaped, but an addition is contemplated which will make it U shaped. Accordingly, the light court walls are faced with an enamel brick, which blends perfectly with the warm gray tones of the matt enamel terra-cotta with which all other exterior walls of the building are clothed. However, the brick extends only to the twenty-

second story, above which the architects repeated the design of the other facades. This could be done economically because the clay could be pressed from the same moulds for all facades.

To the layman perhaps the most obvious success of the architects was the solution of their problem in terms of beauty. What is not so obvious to the lay eye is that terra-cotta was the medium used to interpret the exquisite design, for the man in the street firmly believes that the building is faced with granite. Even poets fall into this error, as witness Thomas Watt Tyler, who published a poem in the Call recently entitled: "A Prayer in Stone and Steel." Mr. Tyler pays tribute to the architect in this fashion:

"For he who dreamed this dream has heard the song  
That God was singing when God fashioned life—  
The song the stars still sing the years along,  
The song the lightning sings in thunder-strife.  
Taking some Stone and Steel and Glass and Wood  
He fashioned beauty: And his work is good."

The poet, however, is hardly to be blamed for mistaking this terra-cotta for stone. As the years go by this stone-like quality will be still more pronounced as "time and storm set their wild signatures upon it."

The terra-cotta of the Telephone Building was all manufactured by Gladding, McBean & Company at their Lincoln plant. The enamel brick for the light court walls was made by the Los Angeles Pressed Brick Company.

## CALIFORNIA PRODUCTS IN THE TELEPHONE BUILDING

[BY JOHN K. STEELE]



WHETHER it was a policy of the owners, the builder, the architects, or a combination of all three, a marked disposition to utilize Pacific Coast products and Pacific Coast sub-contractors was evident from the inception to the completion of the Coast Division Building of the Pacific Telephone & Telegraph Co., San Francisco. The tremendous quantities of materials and appliances available were evidence, too, of the increasing industrial facilities of this section.

One of the largest of the undertakings was the supplying of the sheet metal work, hollow metal, fire doors, elevator fronts and cabs, all of which were fabricated and installed by the Forrester Cornice Works of San Francisco and Los Angeles.

It is said that the hollow metal trim supplied for base and picture moulding by this organization was in the aggregate several miles in length.

The 221 hollow metal elevator fronts as well as the elevator cabs themselves were built and installed by the same company. The advantages of this type of elevator door are said to be their lightness, making them much easier on the hangers, on the opening device or on the operator. They are also said to be faster, an important factor where high speed is an essential as in the vertical transportation installation in this building, they make air control of their operation possible, they possess added safety factors and being finished in baked enamel, effect a saving in maintenance expense.

In this connection, it is interesting to note that the modern tendency in elevator door construction seems to

be toward solid doors instead of doors of glass. This permits the operator to devote undivided attention to the operation of the car without being distracted by happenings or visible objects outside the door of each floor passed, and helps therefore to speed up vertical traffic. But still more important is the fact that it eliminates the often expensive finishing of the entire interior of the elevator shaft and puts an end to the constant maintenance expense of keeping every inch of visible shaft clean.

The Forrester Company responsible for these large metal work installations in the Telephone Building also completed the installation in the Pacific Gas & Electric Co. Building, San Francisco, of 1351 Campbell windows, Nonpareil skylights, Met-Elec base, baked enamel finish and hollow metal doors and trim throughout the structure.

\* \* \*

### FELCHLIN COMPANY CHANGES

The firm name of the R. F. Felchlin Company, Architects, Engineers and Managers of Construction, has been changed to Felchlin, Shaw & Franklin. Offices are now maintained in the Commercial Exchange Building, Los Angeles, as well as in the T. W. Patterson Building, Fresno, California.

\* \* \*

### DRAFTSMEN FOR NAVAL CONSTRUCTION

The United States Civil Service Commission states that a number of naval establishments are in need of draftsmen in connection with naval construction. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C.

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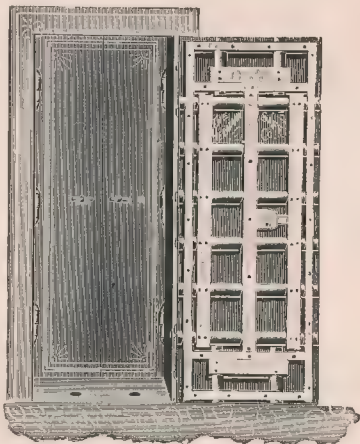
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### CONSTRUCTION OF EL MIRASOL BUNGALOWS

BY E. KEITH LOCKARD

The El Mirasol Bungalows are one-story buildings of a rigid wood frame type with concrete foundation upon which a redwood plate or mudsill is bolted. The floor joists rest directly on this plate and on intermediate girders supported by underpins on concrete piers.

The exterior walls are built of 2x4-inch studding 16 inches on center, extending in one length from the mudsill to the top of the parapet wall, ribbon boards being cut into these studs to carry the wooden ceiling joists and roof framing. The exterior is sheathed solid with 7/8-inch Oregon Pine sheathing covered with water-proofed paper and over this is securely nailed heavy galvanized iron chicken wire and finished with cement plaster. The rough flooring is 7/8-inch and the finished floors are the same in thickness.

Interior studding is 2x4x16-inch on center and all stud walls are braced and blocks used for fire stops. Partitions between rooms are sound-proof with a layer of Celotex. All inside partitions and ceilings are lathed with wood lath and plastered with hard wall plaster. Ceiling joists are wood and the roof is framed with wood rafters, the loads from which are carried directly on partitions and the roof is sheathed solid with 7/8-inch wood sheathing and covered with built-up asbestos roofing. Over this roof is constructed a board covering for insulating purposes, making an additional air space between the roofing and this boarding. Special care is taken throughout in regard to nailing, spiking and tying all structural members in the best workmanlike manner. This I believe to be the reason for the notable way that these buildings have withstood the recent Santa Barbara disaster.

\* \* \*

The death of Mr. Virgil G. Marani, chief engineer of The Gypsum Industries, Chicago, occurred November 2.



Liberty Bank Building, San Francisco. H. A. Minton, Architect  
Ornamental Iron Entrance and Bronze Teller Cages  
Show True Craftsmanship.

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## THE TELEPHONE BUILDING EMPLOYEES' CAFETERIA

[ BY M. M. NERVA ]



ORTUNATE, indeed, are the employees in the new Coast Division Building of the Telephone Company, for a model cafeteria of great convenience and beauty has been provided for them on the twenty-second floor and it is one of the most attractive features of a building replete with features designed to make for the comfort of its occupants.

A rare combination of beauty and utility is achieved in the cafeteria. Situated so high above the city's traffic, the view is delightful. Every modern convenience for good cookery and for expeditious serving of a large number of persons in a short time is provided. The designers have succeeded to a remarkable degree in obtaining a compact arrangement for the preparation and serving of food and so concealing and subordinating it to the more attractive features that once one has passed to a table, the serving table and all the machinery of food preparation is lost to view.

The ceiling and wall surfaces of the room are finished in transparent glazes over a plain painted ground. But the hand-made glazed tile wainscoting installed by Malott & Peterson of San Francisco makes the room a riot of color. The rich warm glazed tile is profusely and happily used throughout the dining hall, while the inside of the terra cotta piers dividing the windows from the exterior have been beautifully decorated with a harmonious vase and foliated design somewhat on the style of the early Italian Renaissance. Soft greens, blues and warm bright yellow and orange tones are used in the vivid decoration of these piers.

Passing from the beautiful to the practical, which in this case (thanks to the ingenuity of the architects) is scarcely a step, one finds an extremely complete and cleanly kitchen with the most modern equipment possible. The contract for building the serving tables, plate racks, cooks' and bakers' tables has been executed with great care by the Montague Stove and Range Company. Their experts have followed a method of construction which precludes dirt, water or moisture getting through cracks or joints at any point. The installation is sanitary.

Two serving tables, each about 22 feet in length, have been installed. As an integral part of their equipment, they are supplied with the usual refrigerators, warming table, shelving, garbage receptacles and built-in trays for coffee urn and similar utensils.

For all table tops and doors to cabinets, refrigerators and garbage receptacles, monel metal was used.

Tile walls installed by Malott & Peterson in the kitchen as in the cafeteria proper, butt tightly on top of a right-angle bend of monel metal, which drops down from this point to the level of the table top, forming an apron of solid sheet without joint or crack. At the outer edge of the table top this metal has again been bent at right angles. Such a type of construction allows all water or other liquid to drain off directly to the floor.

No raw edges of metal are left. There are no ordinary joints throughout the installation. Where a joint has been necessary around doors or at other points, a clean weld has been made and the metal polished to an even surface.

Ports for accommodation of trays and silver are fitted with shelves of the same metal and doors built into the tile wall. In every case extreme care has been taken to close all joints so that no moisture can seep back of or under trays.

The practical convenience and beauty of this cafeteria,



A CORNER OF THE EMPLOYEES' CAFETERIA, COAST DIVISION BLDG., P. T. & T. CO., SAN FRANCISCO

with its kitchen a model of cleanliness and practical utility and its serving room and dining-room a colorful spot of great beauty, should pay dividends to the Telephone Company in more contented employees.

\* \* \*

### LE BRUN SCHOLARSHIP

THE executive committee of the New York Chapter of the A. I. A., as trustees of the traveling scholarship founded by Pierre L. Le Brun, announces a competition for the selection of a beneficiary. The program will be issued about December 30, 1925, calling for drawings to be delivered about March 2, 1926.

All those wishing to enter the competition should arrange at once for nomination by a member of the A. I. A. Nomination blanks can be had of the secretary of any chapter, or of the Le Brun Scholarship Committee. Nominations should be sent so as to be received before January 1, 1926, by Le Brun Scholarship Committee, Room 1618, 19 West 44th Street, New York.

\* \* \*

### OIL BURNER BULLETIN

A 28-page bulletin, thoroughly covering the methods and procedure in oil burning testing wherever the burners are fired under boilers or in warm air heating plants, has just been issued by the American Oil Burner Association, 350 Madison Avenue, New York City.



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## A BIT OF EGYPT BROUGHT TO CALIFORNIA

[ BY CLEMENT WOODWARD ]



DEFINITE answer to the question: "Can a modern warehouse be a work of art" is found in the completion of the new San Francisco offices and headquarters of the Egyptian Lacquer Mfg. Co. at 1050 Howard Street, San Francisco. Miller & Plueger were the architects, G. P. W. Jensen the builder and great praise has been bestowed for the successful manner in which this bit of the architectural glory that was Egypt's has been brought to a commercial neighborhood and given it a note of beauty and distinction.

The executives of the company have extended a cordial invitation to the architectural profession and to all others interested in building and decorating to visit their establishment and those who have accepted the invitation have found much worth while. For while the structure itself is interesting for its architectural treatment and the happy combination of the beautiful and the practical, the growing importance of the value of lacquer and lacquer enamel and its tremendous possibilities makes any study of the subject not only of practical help but almost necessary, if one is to keep up with the procession.

The Egyptian Lacquer Mfg. Co. is more than 50 years old and has been supplying its wares from offices in New York, Chicago, San Francisco and Los Angeles for many years, but it was not until the recent extensive use of Egyptian lacquer on hollow metal trim, windows and door frames and on hardwood doors and elsewhere in the Coast Division Building of the Pacific Telephone & Telegraph Co., San Francisco, that its possibilities for solving interior decorating problems were fully realized.

The new building of the company on Howard street, with the exception of the exterior, is completely finished in lacquer enamel including walls, the trim, the ceilings, the concrete floors, the stairways. The main entrance to the general offices on the second floor is rendered extremely attractive by a harmonious arrangement of large panels of lacquered hardwoods and the entire treatment of the structure is such that it constitutes almost an education in itself in the possibilities for the use by the architect of this material.

Lacquer has been known for thousands of years. It is used extensively on countless articles in daily use. To the art of lacquering, the world owes much of the scientific knowledge gained from the perfectly preserved objects in the tombs of the kings of Egypt, while our museums are filled with lacquered objects of the ancient Chinese, Japanese and Hindus.

But it is only within recent times that the modern demand for speed in building, for a material to be used in decorating, which can be applied rapidly, will dry quickly, will present an everlasting, hard surface, and will be beautiful, has turned the eyes of the designer and builder to lacquer. Although there are in Los Angeles six buildings in which the entire metal trim was finished with lacquer more than 18 years ago, it is really only within the last year that the modern and better lacquers have been applied on any scale so lavish as that in which this company's products were employed in the Telephone Building, making its occupancy possible months earlier than would otherwise have been the case.

Lacquer and lacquer enamels are indispensable in the metal industries, being used for the prevention of tarnish and oxidation caused by atmospheric changes and to produce unique and beautiful finishes.

They are important in the finishing of wood, imparting a clear, lasting finish and excluding the entrance of moisture, eliminating all possibility of warping and swelling. Over 800 hardwood doors in the Telephone Building reveal the manner in which properly applied lacquer brings out the beauty of the wood, while its quick air-drying qualities make it extremely desirable to the builder who must conform to a strict time schedule. In the case of the miles of metal trim in the building, its application protects and decorates. It enhances the luster and coats the surface with a hard, durable, waterproof film which is impervious to the action of acids.

At a time when the demand for lacquer for modern building requirements is growing so rapidly, the establishment of its handsome new home in San Francisco is expected to make the new Egyptian building a Mecca for architects and others interested in a study of the lacquer technique.

### LARGE LINOLEUM INSTALLATION

THE largest installation of linoleum ever made on the Pacific Coast was executed in its entirety within the past twelve months by D. N. & E. Walter & Co. Over 25,000 square yards of battleship linoleum was furnished and installed by them throughout the new 26-story Pacific Telephone and Telegraph Building, and 15,000 square yards in the new 16-story Pacific Gas and Electric Building. The best full  $\frac{3}{16}$ -inch thick Brown Walton Process Government Standard Battleship Linoleum was used and was neatly fitted in place by experts in the employ of this firm.

This linoleum is said to be the most suitable floor covering for public buildings, being durable, sanitary, resilient, and the artistic brown color forms a splendid ground for the massive office equipment and furnishings generally used in office buildings.

Since executing the aforementioned orders, the Walter Company has taken over the entire Pacific Coast business of the Bonded Floors Company, which comprised their stock as well as their organization, in consequence of which they are better equipped than ever to execute contract orders.

Other large installations of linoleums made by Walter & Company in San Francisco are:

22-story—Standard Oil Building.

15-story—Matson Building.

16-story—California Commercial Union Building.

15-story—Medical Dental Building.

They also furnished over 20,000 square yards for the San Francisco City Hall. This linoleum was installed about eighteen years ago and is today in first-class condition; in fact, since the installation it has not been necessary to replace a single yard.

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# EDITORIAL

## East Meets West

FOR the first time in the history of the American Institute of Architects, its National officers and directors are visiting the far Western chapters as a body. President D. Everett Waid and his associates will spend two or three days in conference with each chapter, going from Seattle to Portland, San Francisco and Los Angeles in turn.

Such meetings cannot but result in greater harmony of purpose and action, and in more definite interest and information as to the aims and activities of the Institute. Moreover, it is always a privilege and a pleasure to meet men of such character and achievements as these nationally known architects. Their stay in San Francisco will be from December 8 to 10.

\* \* \*

## New Schools

THE January issue of the Pacific Coast Architect will be devoted to a selected showing of recent school buildings in California. The State may well be proud of its progress in the housing

of educational facilities, both as to efficiency of equipment and excellence of architectural structure and design. The financial investment is very large, but the dividends in the usefulness of future citizens correspondingly great.

\* \* \*

## Better Ordinances

IN the Berkeley Daily Gazette recently was a thoughtful editorial based on the calm warnings of Prof. Bailey Willis, against neglecting earthquake precautions.

An excerpt:

"The day is past when we can ignore the earthquake or not look forward to the time when we can expect another. Men of science know what to expect from the crust of the earth in our region on this continent and in other places throughout the world, just as they know the sections that can expect visitations from cyclones. In the latter regions the people make no secret of the fact that they have cyclone cellars and they streak for them the moment they observe one of those awesome, funnel-shaped clouds.

"So why in the name of common sense shouldn't we of California admit we are in the earthquake belt and construct our homes and buildings as nearly resistant to earthquakes as it is humanly possible to do so? And the only way this can be effectively done is to put restrictions into our building codes."

This attitude is sensible and timely. Amendments are being made to the Palo Alto Building Code, along these lines, and the first draft of the new Santa Barbara Code goes very fully into the matter. Especially rigid are their requirements for the quality of concrete and cement mortar, the failure of which was responsible for so much of Santa Barbara's damage.

## STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912

OF PACIFIC COAST ARCHITECT AND BUILDING REVIEW, published monthly at San Francisco, California, for October 1, 1925.  
State of California } ss.  
County of San Francisco }

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Charles W. Meighan, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the PACIFIC COAST ARCHITECT and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Name of	Post Office Address
Publisher, Western States Publishing Corporation,	703 Market Street, San Francisco
Editor, Harris Allen	703 Market Street, San Francisco
Managing Editor, None.	
Business Manager, Chas. W. Meighan	703 Market Street, San Francisco

2. That the owner is: (If the publication is owned by an individual his name and address, or if owned by more than one individual the name and address of each, should be given below; if the publication is owned by a corporation the name of the corporation and the names and addresses of stockholders owning or holding one per cent or more of the total amount of stock should be given.)

Western States Publishing Corporation, 703 Market Street, San Francisco; A. Hoffman, 345 Battery Street, San Francisco; Harris Allen, 703 Market Street, San Francisco; H. Collier, 345 Battery Street, San Francisco; N. Brydone-Jack, 117 West Ninth Street, Los Angeles, Calif.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of the total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is: . . . . . (This information is required from daily publications only.)

CHARLES W. MEIGHAN, Business Manager.

Sworn to and subscribed before me this 29th day of September, 1925.  
(SEAL) J. D. BROWN.  
(My Commission expires April 4, 1926.)

The  
Pacific Coast Architect  
extends  
Christmas Greetings  
and best wishes for  
A Happy New Year

# SAN FRANCISCO CHAPTER AMERICAN INSTITUTE OF ARCHITECTS MONTHLY BULLETIN

## OFFICERS

JOHN REID, JR., President  
HARRIS ALLEN, Vice-President  
ALBERT J. EVERS, Sec.-Treas.



## DIRECTORS

J. S. FAIRWEATHER, three years  
W. C. HAYS, three years  
EARLE B. BERTZ, two years  
WILL G. CORLETT, two years  
GEORGE W. KELHAM, one year  
ARTHUR BROWN, one year

## NEXT MEETING

There will be no meeting on Tuesday, December 15, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell street, on account of the special meeting December 8.

## NOVEMBER MEETING

The regular meeting of The American Institute of Architects, San Francisco Chapter, was called to order by President John Reid, Jr., at 7:30 p. m. on Tuesday, November 17, 1925, in the rooms of the San Francisco Architectural Club, 77 O'Farrell street. The following members were present:

John Reid, Jr., Rudolph A. Herold, Frederick H. Meyer, Wm. C. Hays, L. B. Miller, H. E. Burnett, John J. Donovan, Morris M. Bruce, Jas. H. Mitchell, P. J. Herold, Wm. A. Newman, E. H. Hildebrand, Jas. T. Narbett, E. J. Molera, John Galen Howard, Harris C. Allen, Ernest Coxhead, Wm. G. Corlett, H. H. Gutterson, E. B. Hurt, Walter M. Bliss, Sylvain Schnaittacher, G. F. Ashley, E. S. Norberg, Wm. Mooser, Earle B. Bertz, Albert Schroeffer, James Reid, J. S. Fairweather, Louis Mullgardt.

Mr. Reginald Johnson, Past President of the Southern California Chapter, A. I. A., was also present.

In the absence of the Secretary, Mr. Harris C. Allen was appointed Secretary *pro tem*.

## MINUTES

The minutes of the previous meeting were accepted as published.

## OLD BUSINESS

President Reid reported, regarding the visit of the A. I. A. directors, that, at President Waid's request, the tentative program would be amended to omit motor ride on Tuesday afternoon, December 8, setting a luncheon on that day for Institute members only, to discuss Institute business.

## REPORTS

Chairman W. G. Corlett of the Committee on Practice reported on a circular letter of D. Zelinsky & Sons concerning Mr. H. H. Meyers, and offered a resolution as follows:

Resolved, That the Secretary of the Chapter be instructed to write a letter to Mr. Meyers, informing him of the Chapter's approval of the principle involved in his action regarding the contract mentioned in D. Zelinsky & Sons' letter.

On motion, duly seconded, the resolution was carried, after being amended to read, "and condemns the action of D. Zelinsky & Sons in broadcasting this letter."

## COMMITTEES

The Secretary read the following list of committees appointed by the President:

*Practice:* Will G. Corlett, chairman; John Bakewell, Jr.; Geo. W. Kelham, C. A. Tantau.

*Relations with Coast Chapters:* Sylvain Schnaittacher, chairman; H. A. Schmidt, G. F. Ashley.

*Building Laws and Legislation:* Frederick H. Meyer, chairman; Albert J. Evers, J. S. Fairweather, William Mooser.

*Public Information and Entertainment:* Harris C. Allen, chairman; Earle B. Bertz, Edward G. Bangs.

*Education and Library of Architectural Club:* Warren C. Perry, chairman; Edgar B. Hurt, Arthur Brown, Jr.

*Membership:* Wm. C. Hays, chairman; John J. Donovan, Henry H. Gutterson.

*Competitions:* Appointment to be made later.

## NEW BUSINESS

President Reid appointed Mr. Hildebrand and Mr. Bruce to draw up a resolution concerning the death of Mr. August G. Headman.

President Reid introduced Mr. Reginald Johnson, former President of the Southern California Chapter, A. I. A.

A letter was read from Charles H. Gillespie, architect of New York, concerning proposed Roosevelt Memorial in Washington. Moved, seconded and carried that the Secretary write to Mr. Gillespie that the San Francisco Chapter considers that this action should come from the Institute, not being in the province of the Chapter.

President Reid introduced Mr. John Galen Howard, who gave the Chapter a delightful account of his recent extended sojourn in Southern France, Genoa, Sicily, Naples, Alexandria, Cairo, Palestine, Syria, Constantinople, Athens, Venice, Provence, Gascony and Paris.

There being no further business, the meeting adjourned.

Respectfully submitted,

ALBERT J. EVERS, Secretary

\* \* \*

The Atlas Portland Cement Company reports that the following materials, no longer manufactured, are sometimes found in specifications: Blanc White Portland Cement, Berkshire White Portland Cement.

\* \* \*

B. Reed Hardman and J. L. McCreery, Architects, are now located in the Berkeley Bank Building, Berkeley, California.

\* \* \*

Arthur L. Acker, Architect, announces the removal of his office to 629 Petroleum Securities Building, 714 West Tenth Street, corner Flower Street, Los Angeles.

\* \* \*

The Dalzell Hatfield Galleries, 3142 Wilshire Boulevard, invites members of the profession to an exhibition of sculpture depicting child life, which closes December 24th.



# THE "LAST WORD" IN EQUIPMENT

[Concluded from page 8]

electrical contractors, both for the Coast Division Telephone Building and for the P. G. and E. Building.

The Telephone Building is divided into two sections vertically and two riser shafts are provided for distribution. The latter is so versatile that it is possible to obtain any commercial electrical current at any room throughout the building for any purpose desired.

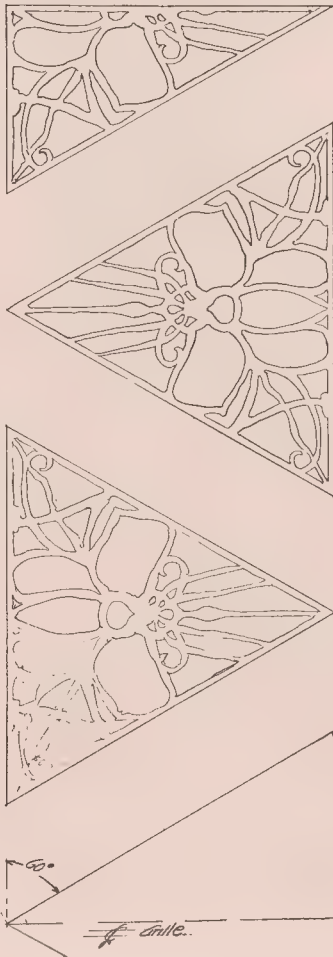
All public space lighting such as corridors, stairs, night and fire lights, etc., are controlled from main switchboard room. Each corridor lighting circuit has an individual push-button control and operating signal.

Exterior flood lighting, panel switching control is such that the 283 flood-light projectors can be divided into six separate groups for various effects or operated as a whole unit by a main oil switch or by six main circuit switches from main switchboard.

The fire alarm and watchmen's call system panels, controls, motor generator set and storage batteries are located in the main switchboard room. The system is of the presignal type and is connected to the city fire alarm system, the presignal circuits operating alarms at special

building stations only. The general alarm circuits ring alarm gongs on all floors and also the city fire alarm. A fire alarm register records all calls and trouble bells indicate any fault in the system.

The watchmen's call system is divided into three groups or building sections with three register units. Both systems operate from the same control panels and storage batteries.



DETAIL OF VENT GRILLE, PACIFIC TELEPHONE AND TELEGRAPH CO. BUILDING



Main Entrance Doors—Pacific Telephone and Telegraph Co. Building  
Miller & Pfueger, Architects. A. A. Cantin, Associate

Ornamental iron and bronze furnished in Pacific Telephone and Telegraph Co. Building, Huntington Apartments, Elks Building, San Francisco; and Hotel Senator, Sacramento, by

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Ultimate seating capacity of the Stadium, 75,000. South end, as shown in photograph of working model, is planned as the site of a memorial to the Chicago men who lost their lives in the World War.

Architects: Holabird & Roche, Chicago. Engineer: Lynn J. White of the South Park Commissioners, Chicago. Contractors: Blome-Sineh Construction Co., Chicago.

Cut cast stone supplied by Benedict Stone Corporation, New York, Chicago, Montreal.

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Grant Park Stadium is only one of a great variety of structures that impressively demonstrate the wide range of adaptability concrete offers to the architect—a range not within the possibilities of any other material.

\* \* \*

If you are interested in receiving additional data on concrete in stadium construction, address the nearest office listed below. Ask for leaflets S-112 and S-104.

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## LOS ANGELES CIVIC CENTER

[ BY EDWARD G. LEAF ]



THE Board of Supervisors of Los Angeles County by official action has approved and adopted the plan of the Allied Architects Association. This plan, prepared under contract with the city and the county, was presented for adoption on January 1 of this year, but in order to make certain that the problem had been handled in the best possible manner the board deferred its decision until such time as a thorough study of the needs of the county in this respect could be completed, and until other plans, prepared by individual architectural firms, could be examined.

The adoption of the great plan submitted by the Allied Architects Association, after nearly a year of the most intensive study of the problem, is of far-reaching significance. It means that nearly fifty square blocks of decrepit and worn-out buildings, relics of an earlier day, are to be wiped out, and the land which these buildings now occupy will become the property of the public, and as such will be beautified with parks, magnificent drive-ways, walks, public monuments, and great public buildings.

The decision of the county was made necessary by reason of the knowledge of the Board of Supervisors that within the near future a number of large and important county buildings must be erected, and that these structures should, if the best results were to be obtained, be erected with reference to a definite and comprehensive plan.

In the resolution by which the Board of Supervisors adopted the Allied Architects plan, the fact was brought out that within the next few years the county will require a great courthouse, to house the Superior Courts, a junior courthouse for the Municipal Courts, a public welfare building, an administration building, and an addition to the new Hall of Justice, already one of the largest and most imposing public buildings in the United States.

The resolution states that it is essential that these buildings be located so as to form a harmonious group; that the cost of so locating them will be no greater than placing them without regard to a plan; that each building must be so placed as to provide for proper vistas and park areas; and that in any plan adopted by the county, the problem of traffic and the parking of automobiles within the Administration Center area must receive the most careful attention.

The Allied Architects plan, worked out with the assistance of the Los Angeles Traffic Commission, and fully indorsed by that body, meets all of these requirements, the resolution says, and the board has therefore made it the official county plan, with only the reservation that the plan will be subject to modification, if and as future conditions require.

In adopting this plan, the Board of Supervisors is taking advantage of an opportunity afforded few of the large cities of the country. A long, comparatively narrow and gently rising eminence, known as Bunker Hill, extends from the vicinity of the old Plaza, the original center of Los Angeles, southward, to the edge of the new and well-improved business district. Originally the fine residence district of the city, this hill has deteriorated until it is now the haven of the cheaper class of apartments and boarding houses.

Under the Allied Architects plan, now the official county plan, this hill will be cleared and in parts regraded; it will be surrounded with a series of great boulevards, and sites will be provided at commanding points for



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LOS ANGELES

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buildings of a cultural and semipublic character. The administrative buildings of the various governments will be located to the east of the hill, in the vicinity of the original Plaza and Plaza Church. Thus, not only will an Administration Center of surpassing beauty be created, but all of the original historic section of Los Angeles will be suitably preserved for all time.

The plans of the Allied Architects Association, an organization of seventy practicing architects of Southern California who banded together to give the various governments the best in architecture at the minimum cost, were completed after nearly a year of arduous work and study, and in their finished form the plans represent the efforts of men who have devoted many years to the study of design and composition. For this work the association is receiving the sum of \$1 remuneration, the preparation of these plans having been undertaken as a community service, with no thought of the aggrandizement of the organization or of any individual member. Furthermore, the association will, in the future, stand in exactly the same position as any individual architect or architectural firms when it comes to the matter of obtaining contracts for the architectural services on any building to be erected in the center.

When the Administration Center becomes a finished thing, it will stand not only as a monument to the enterprise and vision of the City and County of Los Angeles, but as a monument to the unselfish service of the architectural talent of Southern California.

(NOTE—Reproductions of these plans were published in the Pacific Coast Architect March, 1925.)

\* \* \*

## MODERN HEATING PROBLEMS

[Concluded from page 53]

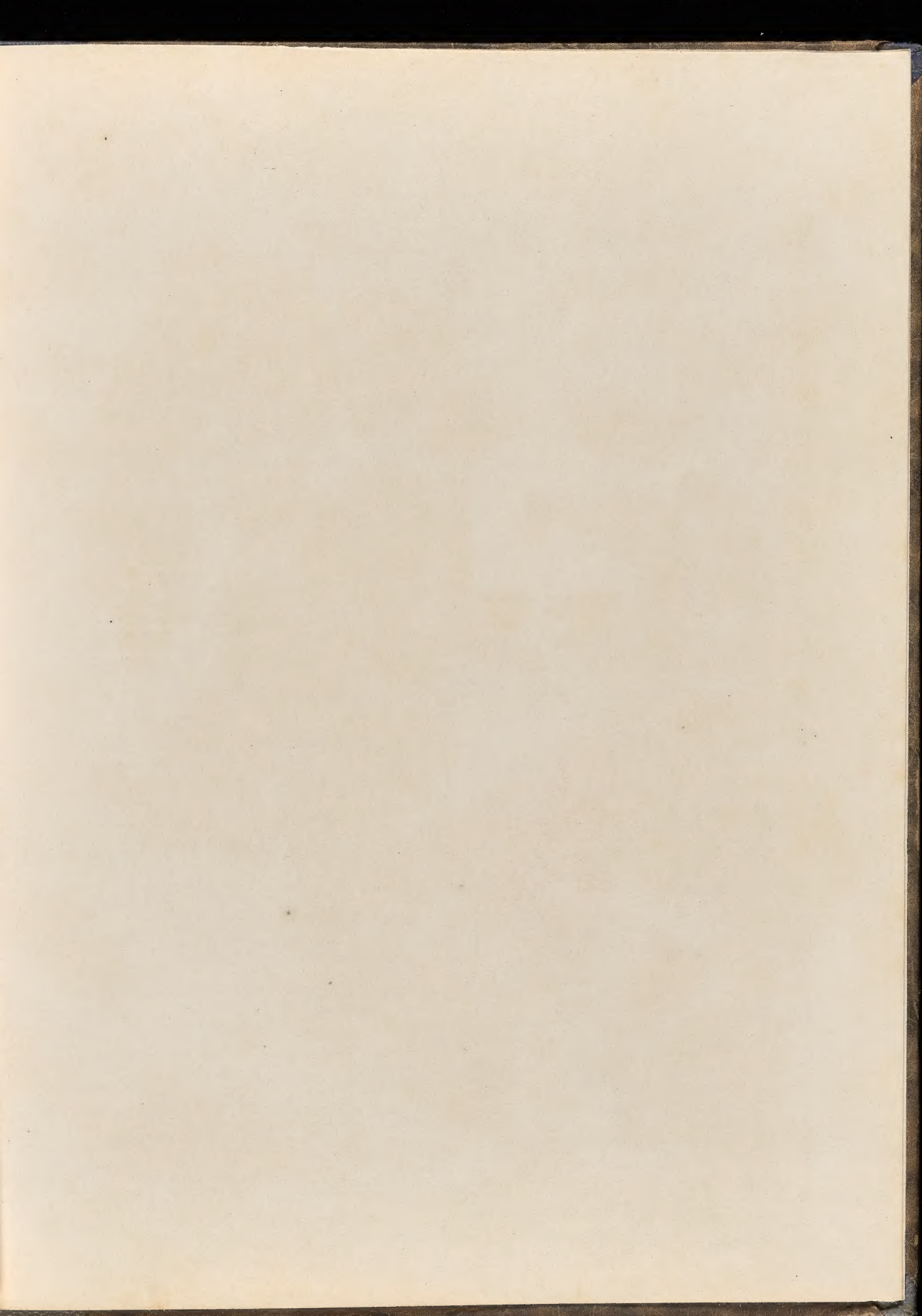
meet individual needs and flexible enough to meet sudden demands for warmth or to remain idle for long periods of time and yet be instantly available.

Radiant gas heaters should always be vented or should be installed in the fireplace, which accomplishes the same purpose. They are safe, clean and give intense heat at surprisingly small expense. They are instantaneous in action. Properly installed, they accelerate natural ventilation of the room. Then there are the gas floor furnaces which may be lighted or adjusted to give any desired room temperature by simply touching the convenient valve. They are extremely flexible, highly efficient and operate at a minimum cost. There are the gas radiators, which should in every case be vented, which have their advantages and are supplanting many central heating plants, especially in apartments and office buildings where they meet every heat requirement of the individual tenant without making it necessary to heat the entire building at all hours, when perhaps only a few of the rooms in that building are occupied.

In conclusion, it may be said that every new building presents its own heating problem and certainly among the three groups whose functions are briefly described here, one can find the ideal, practical type, appliance or system best suited to his purpose.

Codes of installation have been so well standardized and gas companies, the Gas Appliance Society and the reputable heating contractors or dealers maintain such efficient specialists to give help and study in meeting any problem that might arise that there is scant excuse for the too large proportion of mistakes in selection and installation which are made almost every day by those responsible for the design of new buildings. Whether warm-air furnaces, steam and hot-water boilers, or any of the miscellaneous small appliances are desired, we should avail ourselves of the practical help of these practical men, which is so freely offered us.









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